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THE
MARYLAND FARMER:
DEVOTED TO
Agriculture, Horticulture, Rural Economy & Mechanic Arts.

Vol. 4. BALTIMORE, APRIL 1, 1867. No. 4.

PERIODICITY IN AGRICULTURE.

It has been for many years a favorite theory of some observers that seasons very similar to each other recur at stated intervals, whilst others have gone so far as to contend that they move in regular cycles, changing gradually from rainy to dry, and from hot to cool summers, and from moderate to severe winters, and at the completion of the cycle reversing the phenomena year by year, from dry to rainy and from cool to hot summers, and from severe to moderate winters. The terms usually allotted are seven and fourteen years, but thus far no meteorological laws have been discovered to justify this theory of atmospheric changes, or to furnish data upon which such changes may be confidently predicted. Meteorological observations have however, of late years, begun to assume a position of great importance. The Agricultural Department at Washington issues regularly long tables of data taken in widely separated parts of the country. The English Government is also furnished with similar information, not only from its home possessions, but also through various official sources from different parts of the world. Many important laws have by this means already been discovered, especially those relating to the movements of storms. These have been found of the highest usefulness in guiding or warning the mariner in the course of his voyage, and the merchant who send his ships into distant seas. The air, and also the sea, to its very depths, are being mapped out with far more accuracy than the solid earth ever was in the geography of the ancients. With this system—for system it has become—of ocean currents and atmospheric changes, the name of Maury is now inseparably and honorably connected.

Our knowledge of the changes and variations of climate as they effect the earth, and thereby its agricultural products, and of the regular order of the recurrence certain seasons, if there be such, is yet in its infancy. If any determinate results can be reached a thorough study of the subject will have a most important bearing upon our farming interests. It must be remembered, also, that this investigation is

worthy of consideration in another aspect. The science of meteorology can start as yet from no well known and assured premises. The very basis upon which all its reasoning must be founded, is still in a great measure imperfect and obscure. Facts must first be collected by observation in all parts of the country, and running through a long period of time. Therefore, even if the data furnished in order to strengthen a particular discovery should fail to support the theory upon that assumed discovery was based, they may nevertheless afford valuable aid in the investigation of obscure laws governing climatic changes, and may lead to other discoveries of the highest practical value.

Such observations are in consonance with the spirit of the age; whilst “the general expression and activity of the mind in agricultural circles, indicate the dawn of important discoveries to the unfolding of which old things as well as new, may be greatly subservient.” In a communication to the Agricultural Department, which was printed in its report for 1865, the Rev. George A. Leakin, of Baltimore, remarks, that “he no more doubts the connection of periodicity with the field of agriculture, than the existence of gravitation in an unexplored Island.” The assertion is a bold one and will require strong confirmation before it can be accepted in the sense intended by Mr. Leakin—that is to say, a recurrence of similar seasons at stated and regular intervals. The suggestion that follows is, nevertheless, a good one. He requests the Agricultural Department “to call the attention of farmers to well remembered seasons, remarkable for drought or rain, scanty or abundant harvests, &c., and to communicate such facts and dates to the department.” He asserts that “famines, drought, and abundant harvests, apparently fortuitous, are reducible to a sure recurrence and that were the same observations applied to them as to Life Insurance, we might guard against harvest failure with equal advantage.” He supports his assertion by citing some instances of the periodical recurrence of droughts, and also of unfruitful seasons in particular localities. The official com-

ments of the writer for the Agricultural Department are very sensible, and place the whole matter in its proper light. We quote them as follows :

" Now Mr. Leakin, and the writers quoted by him, may or may not be correct. The few instances given in proof are insufficient to establish their theory, and would prove a variable periodicity for different localities, yet the furnishing of the information requested, if it does no more, would refute the idea, and turn the minds now engaged in its support, to some more profitable because successful labor. Even failure is often the precedent to great success. But if facts should be collected sufficient to unfold the existence of such a law for large sections of country what an immense gain—what a valuable saving of time, labor and crops—would result to the farmers and the nation."

MIASMA AND HOW TO GUARD AGAINST IT.

We have already published some observations on the effects of Miasma in certain low lying districts of country, and especially at the South, together with the means of prevention, or at least of modifying its worst influences. The subject, however, is of so much importance that we have thought it desirable to recur to it, and to embody in the following remarks the rules laid down by Professor Henry, in a paper furnished by him to the Agricultural Department.

It is well known that over portions of the Southern and Southwestern States, and even in certain marshy districts in the middle States, there is bred by the hot days and cool nights of the late summer a stealthy, insidious unknown poison called by the general name of Miasma. Diffused throughout the air and carried by its shifting currents to and fro over a great extent of surface, its minute unseen molecules are taken into the human system by swallowing, by respiration, and perhaps by absorption through the pores of the skin. These molecules seem to attach themselves to, and to become inseparably connected with a humid vapor floating in the atmosphere, which is either visible or invisible to the eye. Precipitated to the lower strata of the air, and clinging near the earth during the evening and night, they begin to rise and float upwards with the first warm rays of the morning sun. It is at these two periods that their dangerous and deleterious effects are to be guarded against. To those who are of necessity exposed to such influences, the following rules written by Professor Henry, of the Smithsonian Institute, will be found of the greatest service.

" 1st. Avoid going out after the dew has fallen.

" 2d. If compelled to go out after night fall, or in the early morning, do not go fasting, but at least take some slightly exciting drink, such as coffee or tea—in place of spirits—the reaction from the effects of the latter favoring the absorption of the poison.

" 3d. Wear a flannel garment next the body.

" 4th. The use of disinfectants should not be neglected.

" 5th. Use screens of gauze for the doors and windows.

" 6th. Use boiled water in preference to any other to which add a little vinegar.

" 7th. Use a fire in cool evenings of summer.

" It is also observed that humid air which transports Miasma is deprived of this noxious material in passing through trees, and that in many cases in the same neighborhood a screen of foliage is sufficient to produce a marked difference between two places otherwise similarly situated."

These are rules which it would be wise for all persons to follow who are exposed to malarious influences. Carefully observed they will give a reasonable hope of escape from the virulence of the poison. There are also these further limitations and restrictions to the spread of miasmatic vapor :

1st. It does not cross a running stream.

2d. As a general rule allowing of occasional exceptions, it does not ascend high and steep hills.

3d. It cannot prevail against opposing currents of wind.

Hence it follows, as we have stated in a previous paper on the same subject, there is often considerable choice in the location of the dwelling. When the noxious poison is spread over a large extent of country, and is constantly being generated from the decay of vegetable matter and a peculiarly humid state of the atmosphere, all the precautionary measures here laid down although they may act as palliatives, cannot, of course, be entirely relied upon to prevent attacks of the disease, and there will unquestionably be found cases in which all the barriers have been broken down, and all the restrictions adopted rendered nearly useless. But in the generality of instances where the miasma is localized, as in scattered but limited portions of this State, drainage and liming will often effect a radical change in the health of the neighborhood, and where these are impracticable the precautionary measures so clearly laid down by Professor Henry, will prove of excellent service in guarding against malarious influences.

On old places brought anew under tillage, or where the dwelling is to be rebuilt, or in the division of large farms into smaller ones, it cannot be too earnestly impressed upon the land owner that the choice of a site for his dwelling is of the utmost importance to the health of his family, and that experience has shown that "a few hundred yards further one way or the other," will frequently make all the difference between sickness and health in the household, whilst prompt action in getting rid of all stagnant pools and fermenting masses of vegetation which are known to generate malaria, may save the family from a sickness which might otherwise endure through the late summer and the whole of the autumn months, to the breaking down of the physical

powers, and frequently, to the serious detriment of the customary farming operations.

It is quite surprising how frequently, where the disease is strictly localized, a salutary and entire change is wrought and perfect health secured, by a prompt investigation into the source, and a speedy removal of, the cause of the disease. In such cases palliations are worse than useless. All that is wanted is thorough cleanliness of person and of place. It is well known that Cholera and Yellow Fever originate, like malarious disease of all types, from the fermentation of noxious substances, and may be properly described as of malarious origin. As a striking instance of this, we may cite the sudden appearance of Cholera at the Baltimore Almshouse, in 1845, we believe. It was at first difficult to account for its prevalence; but finally, an investigation of the surroundings of the Almshouse was instituted, when it was discovered that pools of putrid water and masses of filth had accumulated in the vicinity. No sooner were these deposits drawn off and disinfectants applied, than the Cholera ceased its ravages. The Joint European Commission that was appointed last year to enquire into the causes of Epidemic Cholera, and the best means of preventing its recurrence, recommended a similar course of action by tracing its origin to the valley of the Ganges, and suggesting that it be vigorously attacked in its breeding place. This is the only effectual course to be pursued in all miasmatic diseases. Their exciting cause is often merely a stagnant pond, a sluggish stream, a marsh of no very great extent, a damp cellar, or rotting and fermenting vegetation. Very often sickness arises from the dwelling being placed low down in a badly drained valley, with the prevailing wind in summer sweeping right across the bottom land towards the house. Very few farmers study considerations of health sufficiently in purchasing or building, but in every case where heat, moisture, and a more or less rank vegetation exist in low lands—and these lands are the more sought after because generally the most fertile—it would be wise in a purchaser to choose cautiously, and in an inhabitant to live prudently within the rules already given. A single summer's residence is no test of the health of a neighborhood. Even in those most subject to miasmatic diseases, there are years in which from atmospheric causes they do not make their appearance, but in a year or two afterward, a summer may come which will revive the dormant seeds of the disease, and unless precautionary measures are constantly kept up, will endanger the health of the neighborhood.

SUBSTITUTE FOR A CORK SCREW.—Tie a string to an ordinary screw with which to pull out the cork after the screw is inserted in it.

Our Agricultural Calendar.

Farm Work for April.

The busiest part of the spring season now presses upon the energies of the farmer and planter.—Ordinarily, in March, a good deal of preparatory work is accomplished, and many fields intended for oats are broken up, and are either already seeded or are prepared to receive the seed. During the month of March the weather in this latitude was so unpropitious that it may well be doubted whether any considerable amount of preparatory spring work has been done. Under these circumstances the necessity for steady, persistent labor as soon as the season fairly opens is quite apparent. It is equally a matter of moment that whatever is done shall be well done, and that if more land has been pitched for a crop than can be thoroughly prepared for it, the better way is to lessen the number of acres and make up for the lesser area under cultivation by higher manuring and more careful tillage. We also repeat here what we have often said before, that the attempt to cultivate large tracts of land under the present unsettled system of labor, and with a class of field hands whose habits cannot be depended on, is very apt to result in careless work and a deficiency of product not warranted by the nature of the soil. The high rates of wages will also tend to induce prudent farmers to limit the hands employed to the smallest possible number, and to endeavour by increased personal attention and watchfulness, to keep the men steadily and constantly employed during the hours appointed for labor. It is a difficult task at the best, and with the vague and extravagant notions of the new relations in which he stands towards his employer, the negro is but little to be depended upon as a general rule, now that he is no longer under those controlling influences to which he was once accustomed. But whatever changes have been wrought in the old labor system during the past few years, it is true philosophy to make the best of them, and by offering encouragement to white immigrants to settle in the country, seek to compensate, in this way, for the uncertain labor of the negro. The work for the month is as follows:

THE CULTIVATION OF CORN.

Although the proper season has scarcely yet arrived for putting corn into the ground, yet the importance of the crop and the benefit which accrues to it from a thorough preparation of the soil, make it desirable that whatever suggestions are offered in regard to its cultivation should be put forward at once. The importance of this noble cereal, the extent of its cultivation, and its enormous yield to the

acre, under favorable conditions of soil, season, and management, are too well known to need comment. The mode of cultivation is also so well fixed and settled, that very few remarks are necessary on that head. But there are points, nevertheless, which may be stated here, and which if not new to the generality of planters, may yet prove acceptable even to them, as refreshing their memory, and will certainly not be without their value to others who have not considered the question at all.

As to Soil.—The best soil for corn is a rich alluvial, loose, friable, warm and of a good depth. Light sandy loams either naturally fertile or made so by the application of manures come next. Following these are those classes of light lands lying well to the sun, that have been broken up from grass in the fall, and in addition to the decaying vegetable matter receive in the spring a good coating of manure, or of a rich compost, or of some commercial fertilizer, but whatever the nature of the soil it should be thoroughly ploughed and pulverized, and carefully tilled throughout the growing season until the time of fasselling.

Analysis of Corn.—The following analysis of the ashes of the seed, leaves and stalks of corn, will show its inorganic substances, and indicate what the soil requires to bring good crops:

	Seed.	Leaves and Stalks.
Silica.....	.85	58.65
Phosphoric acid.....	49.21	5.85
Lime.....	.07	4.51
Magnesia.....	17.60	.86
Potash.....	22.17	7.33
Soda.....	3.60	8.52
Sodium.....	.6	
Chlorine.....	.29	2.66
Sulphuric acid.....	51	4.88
Organic acid.....	5.17	4.20
Carbonic acid.....		4.05
	99.63	99.53

It will thus be seen that silica, potash, phosphate of lime, magnesia and soda, constitute the chief sources from which a crop of corn draws its supplies of plant food. Every average crop draws some 600 pounds to the acre, of these important constituents from the soil, independently of the waste arising from leaching and evaporation. The relative proportions in which these inorganic elements are exhausted by each successive crop of corn, have been thus stated:

Silicic acid.....	189.04
Sulphuric acid.....	53.56
Phosphoric acid.....	25.79
Phosphates of iron, lime and magnesia in stalks and leaves.....	72.00
Potash.....	72.46
Soda.....	99.46
Lime.....	16.76
Magnesia.....	22.50
Chlorine.....	33.29
Organic acid.....	12.20
	599.10

Taking the above table as a guide, either of the following mixtures will supply the quantity of in-

organic substances taken from the soil by an acre of corn:

No. 1.—20 two horse cart loads of stable manure, to be ploughed under—4 bushels of bone dust, 10 bushels of wood ashes, 1 bushel of plaster and 1 bushel of refuse salt. The latter mixed together, broadcasted and harrowed in.

No. 2. 17 two-horse cart loads of marsh muck or wood mould, 6 do. of stable manure, composted and ploughed under; 4 bushels of bone dust, 10 bushels of wood ashes, 1 bushel of plaster, 1 bushel of salt, mixed, broadcasted and harrowed in.

No. 3.—20 loads of barn yard manure, 20 bushels of wood ashes, 4 bushels of bone dust, 1 bushel of plaster, 1 bushel of salt.

No. 4.—300 pounds of phosphatic guano, ploughed under, 20 bushels of wood ashes, $\frac{1}{2}$ bushel of plaster, 4 bushels salt, broadcasted and harrowed in.

Preparation of the Soil.—It is scarcely needless to say that the ground should be ploughed as deep as the nature of the subsoil will permit, and that the most perfect pulverization of the soil should follow. The corn roots strike deep, ramble freely laterally in a loose friable soil, and an abundant supply of air with sufficient moisture retained in the soil to carry the growing crop through a drought, are essential to promoting the vigorous growth of corn.

Laying off the Rows.—The rows are commonly laid off 4 feet by 4, but in a rich soil and with a good exposure 3 feet by 4 will not be found too close, and from two to three stalks should be suffered to remain in each hill. On thin land the hills should be at least 4 feet apart, and not more than two stalks should be left in the hill.

Number of Grains to the Hill.—From four to six grains should be dropped in each hill, and care should be taken to drop them well apart to prevent crowding the stalks. In thinning subsequently the weakest plants should be drawn.

Time of Planting.—The seasons are so variable and latitude and locality have so much to do with the time of planting, that no positive rule can be applied. The Indian rule was to plant when the leaves of the white oak just began to show themselves. Many judicious planters and farmers say plant about the time the apple trees are just bursting into bloom.

After Culture.—Keep the cultivator and the shovel plough going constantly, until wheat harvest. Keep down all weeds and never leave the field until it is as light as an ash heap.

HAULING OUT MANURE.

Wherever this laborious task is not yet accomplished, let the teams be put on and the manure hauled at every available opportunity.

BARLEY.

Barley has not been for many years past much grown in any of the States south of Pennsylvania. In a good soil and in favorable seasons it pays well, and ought to be brought into more general cultivation. It is not liable to injury from the weather, and very rarely suffers from insects. The only difficulty in regard to Barley is at harvest time. If the weather is rainy it sprouts readily after cutting, and if left to stand until dead ripe the heads break off in cradling. Some trouble in threshing also occurs in getting rid of the beard of the grain, but this is easily overcome.

As to Soil.—The soil best adapted to Barley is a light, sandy or gravelly loam; in a good state of fertility, but Barley will do well in any soil that is not too moist or too heavy, and will not suffer from the land being too rich as is sometimes the case with wheat.

As a Covering for Grass Seed.—Grass seed succeeds better with Barley than with any other covering crop.

Time of Sowing.—Sow as early as possible after the frost is out of the ground.

Quantity of Seed to the Acre.—Sow not less than two bushels of seed to the acre.

Harvesting.—Commence harvesting Barley whilst the grain is yet in a doughy state and before the heads begin to droop. If left until the grain becomes fully ripe, the heads break off and it shatters freely. Leave the grain in swath a short time previous to binding, and after binding shock in two rows without caps.

OATS.

We have already given in the February and March numbers of the FARMER, all the necessary directions for preparing the ground and seeding down to Oats. To those numbers we refer the reader. The chief points, however, to be observed, are to choose a cool, moist loamy soil, inclining to clay rather than to sand, and but recently broken up from grass if a choice is to be had. The land should be well and deeply ploughed, carefully harrowed and rolled after seeding, and the quantity of seed to the acre on a good soil should be from $2\frac{1}{2}$ to 3 bushels.

EARLY POTATOES AND LATE POTATOES.

For full directions in relation to the planting and cultivation of early Potatoes, see the FARMER for March. The following suggestions with respect to late potatoes may not, however, be regarded as inopportune.

All Potatoes do best on virgin soil, cool, moist and filled with vegetable matter. Of cultivated soils those rich in humus and potash should be preferred. They should be light, inclining to sand rather than to clay; should be deeply ploughed and a northern or eastern exposure in this latitude should be preferred to a southern one.

Time of Planting.—Notwithstanding some objections to planting in April, we should prefer doing so late in the month to planting in May. The Potato loves cool, moist weather, and derives great advantage from the spring rains. The only danger of too early planting is that of taking in a second growth late in the season. But if the potatoes mature early, dig them, and after suffering them to become dry stow them away in a cool, dry place. There is no difficulty in keeping them if care be taken in putting them away.

Preparation of the Sets.—It is better to cut the sets of good size from large and well matured potatoes, leaving not less than two eyes to each set.

Quantity of Seed to the Acre.—From ten to twelve bushels are sufficient for an acre of land.

SPRING WHEAT.

Spring Wheat may now be seeded, but it does not generally succeed well in this latitude. If, however, an attempt is made to raise it, sow two bushels to the acre.

MILCH COWS.

See that all milch Cows are well attended to during this month until the pasture grasses are sufficiently advanced. In the meantime, in addition to dry provender give them a daily allowance of nutritious slops. See that they also have access to a mixture of salt, lime and ashes, to strengthen the digestion, which sometimes becomes impaired at this season of the year.

POULTRY HOUSES.

See that these are well cleansed, fumigated and white washed.

OUT-BUILDINGS.

White or color wash the out-buildings and fences if this work has not already been done.

LIMING AND MARLING.

Lime or Marl should be spread on the corn ground or as a top dressing to old fields. Apply from 30 to 50 bushels of unslacked lime or at least double that quantity of marl. In a course of renovation in the case of worn out or partially exhausted soils, the application of lime constitutes the best basis for the proposed system of improvement.

ONIONS AND POULTRY.—Scarcely too much can be said in praise of onions for fowls. They seem to be a preventive and remedy for various diseases to which domestic fowls are liable. Having frequently tested their excellencies, we can speak understandingly. For gapes and inflammation of the throat, eyes and head, onions are almost a specific. We would, therefore, recommend giving fowls, and especially young chicks, as many as they will eat, as often as twice or three times a week. They should be finely chopped. A small addition of corn meal is an improvement.—*Genesee Farmer.*

Garden Work for April.

The month of April is the busiest of all seasons for open air culture in the garden, and without offering any remarks upon the necessity of prompt and vigorous action, we proceed at once to give our usual hints concerning the work to be done.

Cabbage Plants.—If the plants in the hot bed are sufficiently large to set out, prepare a bed of a size sufficient for the wants of the family, manure it liberally and spade it deeply, and rake and pulverize it well. Finally, it will be found of good service to top dress the entire plot with wood ashes and plaster. When this has been done lay off the rows two feet and a half apart; pick out the strongest plants from the plant bed, dip their roots as they are withdrawn in a mixture, ready prepared, of sifted mould and soot and sulphur, reduced by water to the consistence of cream, and whilst in this moist state dibble them in the rows where they are to stand.

Cauliflower and Broccoli.—If the seed of these delicious vegetables have been sown in hot beds and the plants are sufficiently forward, treat them precisely in the same manner as directed for cabbage.

Sowing Cabbage Seed.—Wherever earlier seeding has been neglected, seize the first opportunity to prepare a bed in a warm border and sow the seeds of the various sorts of Cabbage.

Siberian Kale.—For an early supply the seeds of Kale should have been sown last month. If this was not done let the work commence at once. The preparation of the soil is the same as for Cabbage. Broadcast the seed thinly over the bed, rake all in, and press down the earth lightly with the back of a shovel. The Kale will soon start and will need no further cultivation.

Peas.—Plant a row or two of peas at intervals of from two days to two weeks for succession.

Beans.—Plant a few rows of Dwarf Beans every week during the month to follow, in succession.

Lettuce.—Young Lettuce plants from the hot bed should now be set out in the garden to head. If the supply is insufficient, prepare a bed in the open air, make it very rich, and sow additional seed forthwith.

Radishes.—Sow Radish seed weekly throughout the month.

Carrots.—Select the deepest, richest and lightest soil in the garden. Spade it very deeply, make the soil as fine as possible and drill in a few rows of this healthy vegetable. Use no long manure or the roots will fork. For an early crop choose a warm border. Sow in shallow drills half an inch deep, and from nine to twelve inches apart. As soon as the plants are well up thin them out to four

inches apart, and for the main crop to six inches. The after culture simply consists in frequently stirring the soil and keeping it free of grass and weeds.

Parsnips.—The best soil for Parsnips is a light sandy loam. It should be made rich, should be spaded to a good depth and well worked. Sow as early as possible in drills one inch deep and fourteen inches apart. Scatter the seed thinly along the drill and rake all over. When the plants are high enough thin them out to eight inches apart in the rows. The after culture is similar to that of carrots.

Celery.—Where Celery plants have been forwarded in a hot bed and are sufficiently large they may now be set out, or a seed bed may now be formed to produce plants for the main crop.

Salsify or Vegetable Oyster.—In the preparation of the soil for this excellent root follow the directions as given for Carrots and Parsnips. The drills should be made about ten inches apart. When the plants are high enough thin them out to four inches apart. Keep the soil loose and clean about the roots throughout the growing season.

Asparagus Beds.—Early this month spread some well rotted manure over the beds and loosen the surface with a fork. Rake all smooth and top dress with a liberal supply of refuse salt.

Spinach.—For an early supply of Spinach manure the bed heavily, spade and rake well. Lay off the rows a foot apart and one inch deep, and when the plants come up thin them out to four inches in the rows. Keep them well hoed, and the soil free of weeds.

Beets.—For early use the seeding should be done as soon as the ground is in good condition for spading. Make it rich with well rotted manure, and broadcast over the entire bed a liberal dressing of refuse salt. Make the drills an inch deep and eighteen inches apart. Scatter the seed thinly along the rows, cover lightly, and press the earth down with the back of a shovel. When the plants have made a few leaves thin them out to stand six inches apart. The after culture consists in careful hoeing and weeding, at intervals through the growing season.

Small Salading.—Sow small salading at intervals of ten days for succession.

Tomato Seed.—If Tomato plants have not been forwarded in a hot bed, prepare a bed in a warm border and sow some seed as early as possible.

Onions.—A rich soil—too rich it cannot be—and if alluvial land the better, is absolutely indispensable for the proper growth of the Onion. The ground should be prepared as early as the 10th of the month. Make the drills about an inch deep, and fourteen inches apart. When the young plants are well up thin them out in the rows so as to stand four inches apart. Keep the soil light and loose about the bulbs

drawing in first to them and afterwards away from them, so as to allow them to expand on the surface freely. Hoe frequently and water freely in dry weather.

Early Potatoes.—For directions concerning these see "Farm Work" in the March number of the FARMER.

Rhubarb or Pie Plant.—There is yet time to set out a dozen roots of this fine plant, and as the stalks are excellent, both for pies and preserves, no one who can do so, should fail to cultivate a quantity sufficient for family uses.

Fruit Trees.—Attend to these—prune out all dead limbs, scrape off all loose bark and moss, and wash the lower limbs with a mixture composed of one gallon of soft soap, one quart of salt and one pound of flour of sulphur. Loosen the soil about the roots, and either broadcast the surface with a liberal dressing of compost, or a mixture of wood ashes and well rotted stable manure.

Gooseberries, Currants and Raspberries.—Trim these and dig in manure around the roots.

Strawberries.—Clean off the Strawberry beds; top dress them with wood earth and well rotted stable manure mixed together and forked in. Dust over the whole a light broadcasting of wood ashes and salt in equal proportions, and either lay tanner's bark or straw between the rows. If the season should prove dry, water the beds freely of an evening after sunset.

Shade Trees and Shrubbery.—Trim such shrubbery as needs it, and plant out early in the month such other shrubs and shade trees as may help to adorn the homestead.

Herbs.—Herbs of all kinds may now be set out.

PLASTER ON SANDY LAND.—We have long thought favorably of using plaster on sandy lands in this State. We cannot tell how it operates, but we know from seeing its operation for thirty-five years past on such land that its effect are most marked. A liberal investment of plaster in conjunction with other manures, is in our judgment advisable when we wish to raise potatoes, or clover. Mix it with horse manure in winter and we add double to the value of the manure. As a top-dressing we could never realize our money back. Others may have succeeded better. The only exception may be when we have sowed it in early spring on a clover catch of the preceding year. We use some every year as a manure, and our conviction is, that we have never used half enough, especially in conjunction with animal manures.—*Maine Farmer.*

People perform the greater part of the voyage of life before taking in their ballast; hence so many shipwrecks.

EFFECT OF SOIL UPON POTATOES.

Soil has an influence upon potatoes aside from their growth. Some soil—a light sandy loam—will produce mellowness where it is wanting, and improve it where it exists. Manure is hurtful to the quality, and especially to the flavor, of potatoes. Hence a soil sufficiently rich should never have manure for potatoes—and a very rich soil is not required for this tuber. A rank growth of potatoes will give a rank taste. The same potatoes raised on a light natural soil, where the only manure has been vegetable—for instance the carbonaceous matter of new land—will be improved. This accounts for the diversity of opinion in regard to the different kinds of potatoes. The Garnet Chili is condemned by some. We have just heard a man pronounce against them—who gave the preference to other kinds, among which the Peach Blow is one. He had "no luck with the Garnets last year." He raises his potatoes in soil manured from the horse stable. His neighbor has just the reverse opinion. He raised his where little or no manure has been used—some on a discontinued strawberry bed, where saw-dust had been applied for mulching, and afterwards worked into the soil, and rotten when the potatoes were grown. This was vegetable manure, and made the difference between the two crops.

There is another element of great value in the potatoe crop: this is lime. It is probably better than anything that can be used. This in connection with vegetable manure on a light sandy loam, well-drained, will insure the best crop. It will yield largely, as well as of the best quality. On such soil there is also less rot. A moist soil is always to be avoided if quality is to be considered. For feeding purposes, a rank growth is probably preferable, as more potatoes are generally produced.

The soil should not only be light and *loose*, but the seed should be well down in the ground—not raised in ridges. Five or six inches below the level of the soil will give more moisture—in other words, withstand a drouth better, than when elevated above this level, giving a chance for the air more effectually to dry the soil in which the potatoes are imbedded.

Never hill a potatoe—or, if hilling will be done, do it after a shower, soon as the ground will permit. Cultivate and keep the soil mellow, especially in a drouth. This is a thing that is much neglected. We do not cultivate potatoes sufficiently. They require much moisture; and unless the ground is well stirred, repeatedly, there will be great hurt—small potatoes and few in a hill.

Clay will also improve the quality of potatoes, as well as of other roots and grains in general. But it will not much increase the growth.—*Colman's Rural World.*

COMMUNICATED.

FOR THE MARYLAND FARMER.

RURAL ARCHITECTURE AND LANDSCAPE
GARDENING.

My experience in the important branches of my profession, viz: Landscaping country seats, locating and furnishing plans for Rural Buildings of every description, daily impresses me more and more with the necessity of a more general acquaintance with, and knowledge of, the principles which should govern those who are so fortunate as to have improvements to make in either of the branches that I have named. It will be my purpose in this article to give the inexperienced a general outline of the course to be pursued, which will of course, require to be modified and adapted to the peculiarities of the location and the varied wants of the proprietor. These peculiarities in locations and the great variety in the classes and styles of buildings, are so various that no single plan for the decoration, or improvement of the grounds, or for the respective buildings to be erected, will be found adapted to more than one site, or meet the wants and taste of more than one proprietor, hence the Landscape Gardener and Rural Architect should be able to adapt each respective plan of the grounds, and the order, character and cost of the buildings to the wants and means of the proprietor.

To meet the requirements of the proprietor fully and with proper fitness and congruity in the important features of the place to be improved, the artist should be made thoroughly acquainted with the acquirements, taste, means and social habits of the proprietor, the number, age and sex of members of the family, and their respective intelligence and tastes, in order that each artist may supply in his respective field, what will adapt both the grounds and the buildings to the enjoyment of those for whom he is to provide.

By way of illustrating most forcibly the correctness of this position, I will instance two cases. I was once called to improve, in the capacity of landscape gardener and architect, a large estate for a gentleman of wealth, who had no daughters, but a number of sons, who had a great fondness for fast driving horses, for whom I supplied a beautiful track of a mile, which they prised more than any other feature of decoration that art and means could supply. Again, I was recently employed to improve a country seat on which every feature had to be supplied, as it was in a state of nature.* As is my practice in cases where I am unacquainted with the family, I made the necessary inquiries to ascertain for whom I was to provide, when I found an elderly gentleman and his lady of plain, moderate tastes, and a number of maiden daughters, highly educated and of refined taste, who readily told me what features of decoration and embellishment of the grounds they would most enjoy, and one of them had prepared very intelligible and quite practical plans of the house she thought would best meet the wants of the family. I found that in the main features of the plans of the house there was a general concurrence of opinion in the family, though on the part of the parents there was rather an indifference, so that it did not exceed in cost a certain amount.

One feature of the house plan was a conservatory

attached, that would have required a green house of the extent of those used by an ordinary florist, to have perpetuated a supply for it. This of course had to be modified, but could by no means be dispensed with, as all the daughters agreed that it was an essential apartment.

Fine stables and trotting tracks were to this family entirely superfluous.

I might enumerate many other examples of the very distinct requirements of families in the necessary paraphernalia of their rural homes, but these will suffice.

A fact much to be regretted, that architects and landscape gardeners rarely work in unison, which is indispensably necessary, that there may be a proper fitness and adaptability of the work of each to the other, induced the writer to endeavor to qualify himself for the execution of both branches, that he might have control of every feature of a rural home, in which he might create and preserve that degree of harmony and adaptability of the respective features so highly appreciated by those of cultivated and refined tastes. Practice and experience confirms the opinion that landscaping and rural architectural work should be performed by the same artist, and that the skillful practitioner in both branches should have the preference over those who only practice in one branch. I refer particularly to rural buildings.

In order that the execution of the proposed improvement of a country place shall be conducted with economy and dispatch from its commencement to its completion, and that no part of the work performed shall require to be undone, or modified to unite respective features, or parts of one, it is of the greatest importance that a plan of the place in its entirety, embodying as far as the sagacity of the artist can anticipate, every principle and feature of improvement and decoration, all of which should be intelligibly portrayed to a regular scale, on a plat, which, when carefully completed, shall be the guide in all execution.

I find that my patrons generally appreciate the economy of this mode of procedure, and in every case where it has been adopted, and faithfully carried out, it has been most satisfactory, as it not only gives the proprietor the pleasure of knowing what he is to have at completion, but it enables him to decide what particular features he will execute first, and which shall be deferred until the last, and by carefully estimating the cost of the respective parts of the execution, according to the plan, the necessary means required for work and material can be known before it is executed, and the job systematized and its entire cost anticipated, thus avoiding an unexpected outlay which often tends to the discomfiture, and even to the disgust of the most liberal proprietor.

The site of the respective buildings having been established, if a road is to be made to it, this should be done in conjunction with the excavation necessary for the buildings, that earth not needed in producing the desired grades around the buildings may be delivered with one haul where it is needed, that it may not be moved but once. The exact opposite of this course I have seen pursued in numerous instances, and all the material required in construction of the buildings hauled over a natural surface, and frequently at more than double the cost of hauling on a good road. I have also seen the stones for foundations hauled and deposited around the cellar to be excavated, depositing them so near

the cellar that the weight of the stones caused the banks to cave, thus depositing stones and earth into the cellar, a condition of things needing no comment. It is a common practice also of those who conclude that they are fully competent to be their own architect and landscape gardener, that they erect the house first, and stable and other minor buildings last, and even haul all the water needed in construction, and afterwards supply water to the buildings. This last case of self evident want of judgment and economy I have known to be done in several instances. But I am happy to say that a large majority of those who desire to build, make roads, or decorate grounds, have learned that there is economy in securing the best talent and taste and greatest degree of experience obtainable in each branch of work to be performed. Every man attempting to be his own architect, landscape gardener and engineer, is about as ridiculous as it would be for each to undertake to be his own shoemaker, hatter or tailor.

Those most proficient and experienced in the branches under special consideration, not unfrequently commit striking errors, especially in the location of buildings, that the easiest approach shall be secured and one that shall be least expensive to construct and maintain in condition, that which shall approach the dwelling in the direction from which it shall appear most imposing and attractive, and afford a proper easy way to the stabling, from the dwelling. Also in the selection of a site that shall be dry, and of pleasant grade around it, and if possible, well shaded. It is common to overlook one of the most important features, viz: that of securing and preserving the most delightful views, of objects of interest, both remote and near, and last but not least, not to exclude, as far as practicable, all that is objectionable, from view. I was called a few years since to improve a country seat on which much money had already been expended by the direction of the owner, who had no experience in landscaping, but like many others, concluded that it would be a waste of money to employ one of my profession to do anything so simple as the removal of underbrush and the excess of large trees from a fine old forest near the mansion, which he desired to enclose in the lawn.

He committed the common error of deeply grubbing the entire surface among the trees, removing all the undergrowth and many of the large trees, and at the same time effectually removing nature's mulching of leaves. This process, which destroyed most of the surface roots, and let the parching sun to the surface of the ground, that had never before felt the effect of a direct ray from the sun, as might have been expected, killed the first summer, a large number of the best and largest trees which he desired to retain. It was like calling the physician to do the undertakers work. Many of the trees thus destroyed were the tallest and finest specimens in the forest, and their removal without injury to those remaining, required no little skill and care; but my instructions were to spare no time or expense in the work, as the proprietor prized very highly the few fine trees that had survived the severe ordeal that ignorance had inflicted. This place is now one of the best improved in Baltimore county, which may be attributed in the main to the great error committed in the onset, by which the owner learned that all men are not born landscape gardeners nor architects.

J. WILKINSON.

FOR THE MARYLAND FARMER.

FARMERS' GARDENS--No. 12.

POTATO.—(*Solanum Tuberosum.*) Desirable sorts:—
Early Sebec—White-skinned, white fleshed; eyes very prominent and quite deep set; a compact plump potato cooking mealy and of excellent flavor; a few days later than the *Early Goodrich*, but with less vine, or top; equally desirable, if not preferable to that sort. *Early Goodrich*.—A long round, somewhat flattened potato, skin and flesh like the above, eyes prominent and on the surface; both the above are new sorts grown from the seed, the former originating in Maine; the latter one of the numerous seedlings originated by Dr. Goodrich. These two varieties of early potatoes take the lead in the estimation of those who have grown them early; other kinds there are, favored in different localities such as *Early Sovereign*, *Dykeman*, *Mercer*, *Early Stevens*, *Early Hansworth*, *Extra Early White*, *Early Wendall*. Then for later or winter keeping we have the *Dalmahoy*, *Davis' Seedling*, *Garnet Chili*, *Cuzco*, *Calico*, *New White Peach Blow*, *Jackson White*; the foregoing comprise a few of the well tried, and some for the approbation of the public, sorts. A sandy, or gravelly loam well drained, or inclined to be dry, is the best soil for the potatoe; the soil should be rich, made so from previous culture and manuring, or green sward of clover. They should be planted as early in Spring as the ground can be made ready, so they may ripen and be gathered before fall rains, which is often very detrimental to the crop, increasing the liability to rot on rich land. Plant in hills $3\frac{1}{2}$ by $2\frac{1}{2}$ feet and four inches below the level of the surface. A small handful of ashes on the hill just after they come up is beneficial to the crop. Cultivate with the hoe and cultivator three or four times, and just before blossoming hoe for the last time, making a good broad flat hill. When the potatoes attain the size of a large hen's egg, and crack open when boiled, they will do to begin upon. When the vines are fully dead and part readily from the tubers when drawn, dig them with the potatoe hook, or fork; allow them to dry without the sun shining on them to warm them, pick them up, assort and lay them away in a dark, cool, well ventilated cellar where they will not freeze.

SWEET POTATO.—(*Ipomoea Batatas.*)—To succeed well with the sweet potato it is necessary that the soil be light, rich and warm. This being a native of a hot climate it succeeds in a colder one only with great care and attention. The keeping through the winter is quite difficult in a cold climate. To preserve well they require a dry warm atmosphere; by packing in dry sand or fine cut straw in boxes or barrels and placing them in a warm dry cellar, or room, they may be kept even in a quite cold climate. They are mostly grown from slips, or sprouts, started in hot beds or forcing pits by laying the tubers thickly together in a hot bed; after the heat has risen from the manure and subsided to 90°, cover the manure with 2 or 3 inches of leaf mold or good garden soil and on this pack the potatoes; as soon as the eyes begin to swell and start, cover the tubers with similar mold to the depth of an inch, after they come through add more mold and treat as other tender plants under glass. About the middle of April is the time to commence, and the slips will be ready for planting out by the first of June. Set the plants in rows 4 feet apart and one foot in the row, raise the rows in ridges 8 or 10 inches high before

setting and set on the top of the ridge. Cultivate by hauling the dirt up the ridge with the steel rake, and after the vines have grown a foot or two lift them on to the ridge to prevent them rooting at the joints; keep them free of weeds, &c. The sorts mostly grown are Nansemond, Red Skinned, and Yellow Skinned.

I believe I have now gone through with the culture of all the vegetables I proposed at the commencement of this series of articles. I have only one or two suggestions to make and those are in relation to seed. It is well known that the matter of seed is an important one; that without *good* seed we cannot expect to raise good vegetables, therefore my advice to all is, raise your own seed, preserve it in boxes, bags, etc., labelling each kind with name and date of year when grown. Some seeds retain their vitality and are better after attaining some years of age, others will vegetate only the succeeding year to being grown. To retain and improve good qualities it is necessary to select the best, earliest and most distinct specimens of the variety; those grown near the center of the plant or vine. Grow plants of the same class in different localities, or what is better in different seasons, to prevent hybridizing or mixing, and then save only the most perfect and well developed seed, or tubers. When seed is grown from roots the second year, select the best, and those having the most desirable qualities, and save the seed from only the central shoot. In this way of growing your own seed you will never be at fault with seed. In procuring new varieties, try all novelties on a small scale and procure your seed from reliable sources.

There are a few *Aromatic, Pot, and Sweet Herbs* that are grown in our gardens; some of which should find a place in every farmer's garden. They are generally raised from the seed sown in early spring. And as only a small quantity are necessary for family use, they will each occupy only a small bed. They thrive best in a mellow, free soil; care should be used to gather them at just the right time. I name below a list of herbs of which the greater part are perennial, and will multiply from the seed they drop, or from parting the roots. They should all be cultivated in beds preserving a suitable distance apart. To preserve, gather at the proper season and dry in an airy building, and when fully dry rub them through a sieve and pack in tin boxes and keep them where they will remain perfectly dry, or they can be preserved—the herbs, by wrapping them in paper after becoming well cured: Anise, Balm, Lemon, Sweet Basil, Borage, Cardoon, Caraway, Chicory, Coriander, Cumin, Dill, Hyssop, Horehound, Lavender, Pot Marigold, Rosemary, Rue, Sage, Saffron, Summer Savory, Sweet Marjoram, Sweet Fennel, Thyme.

If in this series of articles I shall have been of any service in aiding the farmer who desires to improve his garden most advantageously, my object will have been attained. I will now bring this already extended series of articles to a close after entreating every one who may have followed me thus far, to endeavor to improve his circumstances and to relieve the good housekeeper of her perplexity, often in the summer months, of knowing what to provide for her table that will be relished, to give more attention to his garden. He will find that he will derive greater profit, if not pleasure, from a small garden well tended than from several times the area devoted to ordinary farm crops. If he is not desirous of raising a large variety of vegetables, etc. let him se-

lect any variety desirable and give them a place in his garden and give them *good* culture, and if he is dissatisfied I think his wife and children will relish the productions when other vegetables are old and scarce and only seasoned with salt meats. The health of a family is often improved by having good fresh green vegetables in early summer, and good ripe small fruits in variety to resort to: when we have these in variety the good woman of the house is never at a loss to know what to provide for the table, whatever the emergency.

GIARDINERE.

FOR THE MARYLAND FARMER.

THE MEXICAN BLACK BEAN.

I have often wondered that "The Mexican Black Bean," or "Turtle Soup Bean," as it is popularly called, has not been more extensively cultivated in Maryland. It is highly appreciated elsewhere, and always brings the highest price in the Philadelphia market. I have never seen a chemical analysis of it, but will venture to say, judging from its well-known properties, that it contains more nitrogenous matter than any other of the Legumes. It is, in fact, a substitute for animal food with millions of human beings, who rarely eat meat. With a proportion of corn bread, a little hog's lard and some Chili (red pepper) occasionally, a small portion of beef or a fowl, it constitutes the almost exclusive diet of the Mexican and other Spanish American races, a hearty and hardy people, capable of enduring much labor and exposure.

The following is an extract from my journal written in Mexico: "The favorite dish in Mexico is made of the *frijole* (frihole) which is universally brought on the table—by the wealthy as a kind of *bonne bouche*—by the poorer class as their substantial meal. It consists of small, brown, black-eyed beans, boiled for six or eight hours in soft water, and then mixed with lard, salt, and *chili*, which latter substance enters as an essential ingredient into all their cooking. It is, when thus prepared, a very agreeable and nutritive vegetable; but to my taste would be better without the red pepper."

I brought the seed from Mexico and have cultivated it for twenty years in succession. In our climate it need not be planted till the middle of May, and will then perfectly mature before frost. I plant it in drills about three feet apart, and find that it yields abundantly on moderately rich land. It is rather dwarfish in its growth, and on land recently manured has a tendency to run too much to stalk. I have observed no deterioration of the seed since I first commenced its cultivation.

I use this vegetable very extensively in my family, not only in the Spanish style, but as a soup, prepared in the following manner:

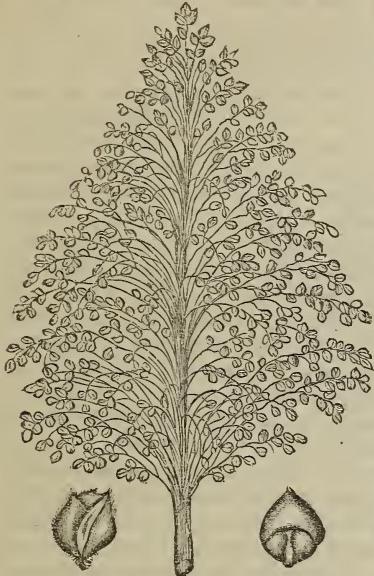
The Beans are boiled about eight hours; a small piece of bacon being placed in the pot. They are then strained through a cullender, rejecting the husks or outer covering, and salt and pepper added for seasoning. In this state it is a *thick soup*, cheap, palatable, nutritious and digestible. The poor man's food, the rich man's luxury.

I hope to see it brought into general use by our people. We are accustomed to eat too much meat, especially in hot weather, for the purses of many and the good of all. A more general consumption of our delicious fruits and healthy vegetables would be for the benefit of every body, except the Doctors and butchers.

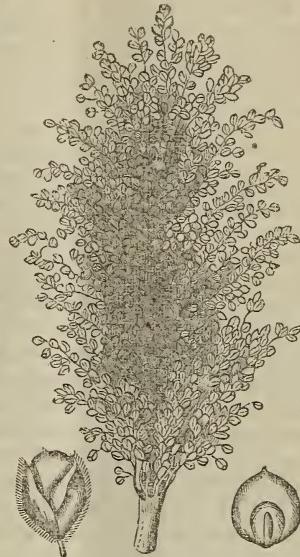
GEO. W. HUGHES.

Best Varieties of Canes as adapted to the latitude of Maryland and Virginia.

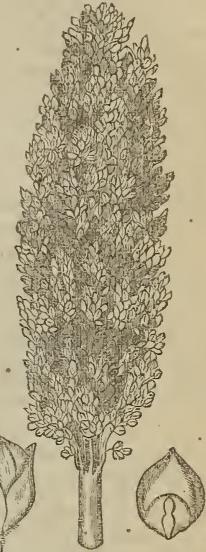
The influence of climate, soil and cultivation, has caused much change in the Chinese Cane, and as a result, there are in different places various dissimilar plants, all claiming to be the true Sorgo Cane. There are, however, but two varieties with marked characteristics sufficient to designate them, that have any peculiar merit or value in the estimation of the most practical growers of this country. These are *Regular Sorgo* and *Early Sorgo*. The *Regular Sorgo*, or true Chinese Cane, for general purposes and a main crop, has more friends than any other variety; it has the reputation of making a finer and better flavored Syrup, yet the *Early Sorgo* has many warm supporters. We cannot say too much in praise of the *Regular Sorgo* as the principal kind to be planted for a main crop. We append an illustration of these varieties, as well as the best *Imphees* recommended for cultivation.



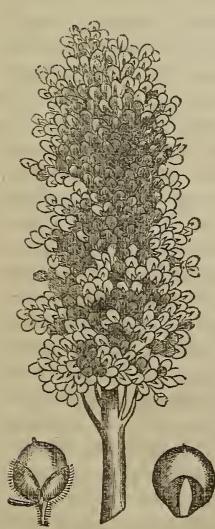
Regular Sorgo.



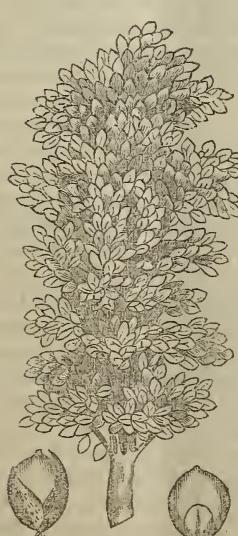
Early Sorgo.



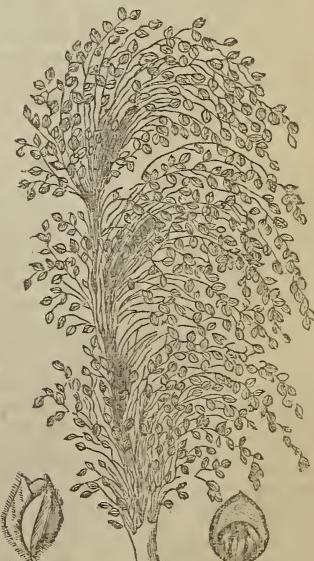
Com-se-a-na or Otaheitan.



Liberian.



Ner-a-za-na, or White Imphee.



Shla-goo-va, or Red Imphee.

Oom-se-a-na or Otaheitan.

This variety is very highly esteemed for its granulating qualities, hence for Sugar making it is in great demand; while for Syrup, it does not stand as high as Regular Sorgo. We have had fair results both as to Syrup and Sugar from this variety, yet we consider it in no respect superior to

Liberian.

A new variety which is growing in public estimation and esteem among Sorgo growers. We grew it the past year with good results, considering the very unfavorable season, realizing a yield of over two hundred gallons of very fine Syrup per acre. We did not test its granulating qualities at all. It does not grow as tall as the Regular Sorgo or Oom-se-a-na—is very powerful to withstand the effects of the storms, hence, rarely falls down, and makes a more abundant yield of rather darker, but finer flavored Syrup than either. It is not quite so early a variety as the Chinese, but will fully mature itself any where South of this latitude; hence we do not hesitate to recommend it in the highest terms as one of the most valuable varieties of the Northern Sugar plants.

Ner-a-zu-na, or White Imphee.

This variety is considered as one of the earliest, and by some, one of the best known. Our experience, however, is in favor of the Liberian and Oom-se-a-na for all practical purposes; the Liberian being its superior for Syrup, and the Oom-se-a-na or Otaheitan, for granulating qualities. Either of the above varieties ripen early enough for this latitude.

Shla-goo-va, or Red Imphee.

Cultivated with success in some parts of the west, but not a desirable variety for this latitude. It is a late Cane, grows very tall; is liable to fall easily, and is not of peculiar richness or value. It strongly resembles Broom Corn in appearance of seed heads, and is easily confounded with it. A number of mixed varieties are prized for various points of excellence, and may be readily selected from the field by the grower at the time of harvesting the crop. We have seen a number of these mixed Canes which were selected from year to year, and made very desirable varieties; being quite as good in all respects as either of the original kinds.

Pure Sorgo Seed

is a matter of the first importance to the cultivator. The natural tendency of the plant, like all exotics, is to change, deteriorate in quality and quantity of juice, and mix or hybridize with other plants of the same species. Its greatest enemy among plants, in common cultivation, is Broom Corn; hence never allow the two to be grown any where near each other—not even on the same plantation if it can be avoided. Infected canes may readily be detected at time of cutting by a little care and observation, which will always pay the grower who desires to save seed of any value for planting purposes. Our plan has been as follows: Go into the field of ripe Canes and before saving any seed-heads, cut off the stalk about four feet from the ground, and if it has even the smallest *pith* in the heart of it, discard that head as worthless for seed, and so keep on till you find a stalk that is free from *pith*, of a uniform color through its whole diameter, heavy, and full of rich juice—from such a stalk you are sure to get a seed-head of value. Save such, and no other, and by careful cultivation you will soon have a Sorgo Cane that will yield three to four hundred gallons

per acre. Impure seed can never be detected in any other way, hence trust no seed from any source, unless you know it has been selected in the field when the Cane was cut, by some one of skill and care, as above described. The complaint of a gradually diminishing yield of Syrup per acre is increasing yearly, and really the wonder would be were it otherwise, when we reflect on the amount of carelessness shown by the mass of growers in the selection of seed for planting.

New Process of Refining Sorghum Syrup.

The Sorghum enterprise is becoming greatly extended, particularly in the West, where it is now an interest of no inconsiderable magnitude. It is estimated that from thirty to thirty-five millions of gallons are annually produced. The natural flavor of Sorghum syrup is, to many persons, rather unpleasant, owing to a crude, vegetable taste which is usually present. This offensive quality is readily removed by the ordinary process of refining; but the means employed by regular sugar refiners are not accessible to the farmers of the country, and they have hitherto been compelled to sell their surplus product of syrup in a crude state, at much less than its intrinsic value compared with the syrup and molasses of the tropical cane.

A new process has been discovered which promises to enable the producer of sorghum to refine his own syrups at a trifling expense, making it equal to the best syrup of the refiners. It can be employed either in the original process of making syrup from the cane or in refining crude syrup. The process has been exhibited in the laboratory of the Department of Agriculture for several days by Mr. William Clough, of Cincinnati, where it attracted much attention. The operation consists in precipitating the offensive impurities suddenly, and, by an apparently sovereign re-agent, producing a syrup perfectly clear and having an extremely agreeable flavor, not unlike maple syrup. Mr. Clough operated upon some cane juice pressed from canes raised in the experimental grounds, which had been stored all winter and were somewhat decomposed, producing a syrup which Mr. Newton the Commissioner, and others, pronounced unexceptionable.

The question was asked by every one whether a syrup treated by this process will not make sugar. It certainly removes the gummy or mucilaginous matter, which is understood to obstruct granulation, and it would seem to be the very thing required to effect the object so long and so earnestly desired.—The exhibitor of the process, in answer to inquiries upon the subject, remarked that there had been a great many sugar promises and but few sugar performances. Parties have been entirely successful in making sugar by this process on a small scale, and expect to make it on a large scale the coming season.—*Chronicle.*

FRUITS AND FRUIT TREES OF THE MIDDLE STATES :

Propagation, Influence of Stocks, Diseases, and Enemies.

BY WM. C. LODGE, CLAYMONT, DELAWARE.

DISEASES.

Both fruit and fruit trees are subject to so many diseases that, frequently on this account, and in consequence of destructive insects, a good and full crop is not gathered during the whole life of the tree. We will mention a few of the most fatal, and give such remedies and preventives as have been found beneficial.

The apple is such a hardy fruit, and the habit of the tree so uniformly healthy, that we know of but few diseases to which it is subject, and those are not of a fatal character. The most serious is that known by the general name of *blight*, which affects the terminal branches and destroys the crop for the year. The cause is attributed by some to the sting of an insect—by others to frost; but being involved in uncertainty, the remedy is likewise uncertain.

The pear is also subject to the *blight*, which assumes a more dangerous form than in the apple. The disease begins with the early summer, and first appears in the extremities of the branches, from which it extends rapidly toward the trunk, causing often the speedy death of the tree. Sometimes its strength is expended before the destruction of the tree is completed, and it may partly recover. It is indicated by a shrivelling of the bark upon the branches, and withering of the leaves which still adhere to the affected branches. Such trees as continue a vigorous growth late in the autumn are most subject to the disease, and, consequently, fertile soils and thorough tillage have a tendency to encourage the malady. The disease is contagious, and young trees in the immediate vicinity are liable to be affected if not attended to in time.

Remedies have been tried, though not always with complete success—such as washing the parts affected with ley; also, Downing recommends a solution of copperas and diluted muriatic acid. But the *sure* remedy is to cut off the branches at once below the part affected, and burn them. This will be a certain cure, provided the cut is made at a sufficient distance below all external signs of the disease. Sometimes the sap is vitiated below the part in which the effect is apparent, and the disease breaks out again.

Black knot.—Except in a few favored localities, the plum is, of all stone fruit trees, the most liable to disease. Its peculiar malady is the black knot, which is an eruption of the branches, causing an excrescence like great, unsightly warts, and so interfere with the flow of the sap as to cause the death

of the branches beyond the place affected. The black knot, like the pear blight, is attributed to various causes, the most probable of which is a disease of the sap imparted from either the soil or atmosphere; as healthy trees, removed to a neighborhood where the disease is unknown, are not affected. The disease seems to pervade every part of the tree, and shows itself as virulent in the young trees which spring from the stump of the affected tree as it was in the parent. Of all the remedies yet recommended, we have not found any one effectual, though we believe a proper application of a solution of salt would preserve the health of the tree, and prevent the destructive attacks of the curculio on the fruit. The difficulty is in the application without injury to the tree.

The cherry is also subject to a disease which shows in the rupture of the bark, though the wart-like excrescences are not formed as on the plum. Like the sap blight of the pear and the black knot of the plum, the certain cause and remedy have not yet been determined. Some varieties, as the Black Morello and the English Morello, are subject to the black knot similar to that on the plum, and, as in regard to the plum, we candidly admit both cause and remedy are to us unknown.

The yellows.—In the middle States, where the peach arrives at the highest perfection, it is subject to but a single disease, and that, when fully developed, is of a fatal character. It is known as the *yellows*, and when young trees are grown from the seeds of diseased fruit, it sometimes shows itself in seedlings one year old. In most cases it is not noticeable until the tree has borne one or two crops of fruit, when it is indicated by slender, erect branches starting up from the larger limbs, a general sickly appearance of the tree, and a dull color of the foliage. The fruit also becomes discolored, and so changes from the natural taste and appearance of the variety as not to be recognizable as the same. When first attacked, a single branch only is sometimes affected; but by the following season it spreads over the whole tree, which struggles feebly for life for a season or two, producing small, immature, and flavorless fruit. The yellows is a contagious disease, and is imparted to other trees by contact or propinquity, as well as by a knife used in pruning trees affected, from buds taken from infected trees, and from the soil in which such trees have grown.

Remedy.—As a remedy, we have known iron filings and scales from around a blacksmith's anvil, placed about the roots, at the rate of a good shovelful or more to the tree, to have a good effect. An application of hot wood-ashes about the roots, so that the ashes come in direct contact with them, will prolong the life of the tree; but the best pre-

ventive and cure is an application of Peruvian Guano, sowed around the ground and harrowed in. We have seen old orchards, apparently worn out, revived by this application, which have borne fruit for many years after. One of my neighbors has adopted the plan of throwing fell (air-slaked) lime over his trees about the time the curculio deposits its eggs, and of sowing guano in his orchard every spring, with most satisfactory results. His crops are unsailing, and the life of his trees extended to more than double the age of others in his immediate neighborhood.

We believe we have discovered a sovereign remedy for nearly all diseases of our fruit trees, as well as for the destructive insects, which so frequently destroy our fruit after it has given promise of satisfactory crops. It is nothing more than common salt. We have experimented with it on bushes and young trees, with admirable effect in many instances, though sometimes with injury, owing rather to the manner of application than the agent employed. Its application was first suggested to us as an insect destroyer, from the success of an experiment made upon the tree-moth. We found it altogether effectual in preventing injury from this troublesome pest, and so we extended our experiments, with almost equal success, to the fruit-destroying family of pests. The difficulty is in the proper application of the remedy or preventive, as salt is so injurious to tender vegetation that, frequently, we cannot reach the insect without also touching a bud, blossom, or tender leaf. Where the atmosphere is impregnated with saline particles, nearly all our troublesome insects and most of our diseases of fruit trees are unknown. The most perfect fruit of the peach, plum, nectarine, and apricot, and the most enduring trees, are found in the neighborhood of salt water. On the higher lands, along the Delaware and Chesapeake bays, all stone fruit trees bear plentiful crops, and endure much longer than in the interior. On the islands of the bays where the shores are washed by salt water, we have found peach and plum trees with their loads of fruit in such perfect condition as we have never seen elsewhere. Of the many plum trees we have examined in those localities we have yet seen no trace of black knot, nor any sign of the curculio on the fruit. Peach trees flourish and bear annual crops at the age of fifty, and in some cases seventy years, and on the islands of the Chesapeake the figs produce two or three successive crops of perfect fruit in the same season.—*Agricultural Report for 1865.*

Keep carefully out of a quarrelsome person's way, and still more carefully out of his way.

ACTION OF SALT ON PERUVIAN GUANO.

Dr. Voelcker, in a late article in the Royal Agricultural Society's Journal, has the following:

"A distinct proof is here given that common salt has the power of liberating ammonia from soils that have been highly manured from rotten dung, Peruvian guano, and other ammoniacal manures, which, in sandy soils especially, exist in feeble combinations, that readily undergo decomposition when brought in contact with a solution of salt. In the case before us, a portion of chloride of sodium acted upon these feeble ammoniacal combinations, producing on the one hand soda, which became fixed in the soil, and on the other, chloride of ammonia, which passed into solution.

This analytical result throws light on the function of salt in agriculture. It is well known that salt is most beneficially applied to light land after a good dressing with farmyard manure, alone or in conjunction with Peruvian guano, and that its application under these circumstances is particularly useful to wheat crops in general. Practical experiments on a large scale have shown, indeed, that by salt alone a large increase of grain was produced on land in good heart—that is, had been previously well manured. In this case the application of salt evidently has the effect of liberating ammonia, and rendering it available for the immediate use of our crops, which we know from experience are much benefited by it. On land out of condition, salt must not be expected to produce such a favorable effect, and as this manure no doubt is sometimes put upon land exhausted by previous cropping, in which, therefore, it does not find ammoniacal compounds upon which it can act, one reason becomes evident why salt is ineffectual as a manure in some cases, while in others, its beneficial effects are unmistakable.

Peruvian guano and salt is a favorite dressing with many farmers, and justly so. It has been supposed by agricultural writers that the benefits resulting from this mixture are due to the property of salt to fix ammonia. I have shown, however, elsewhere, that good Peruvian guano does not contain any appreciable quantity of free ammonia, and, moreover, that salt does not fix ammonia. Whilst theory has erred in ascribing to salt a power that it does not possess, the practice of mixing guano with salt is one which can be confidently recommended. So far from fixing ammonia, salt rather tends to liberate and disseminate through the soil the ammonia contained in the Peruvian guano applied to the land, which thus becomes fixed by the soil."

Beecher is square for woman's having the ballot.

OATS CROP.

Correspondent *Chester*, who reports the discussions of "Our Club," for the *Germantown Telegraph*, gives the following on the subject of Oats:

The first questions asked were: What kind of seed shall we plant? Shall we plant our own common oats, weighing from nineteen pounds in unfavorable seasons to thirty-two in the most favorable ones, or will it pay to plant the produce of seed imported from England or Canada, weighing from forty to forty-four?

One of the members, in answering this question, stated that in 1865 he planted seed imported from Canada, weighing forty-two and one-half pounds per bushel; the first season the yield was about fifty-two bushels per acre, (weighing forty-two pounds per bushel;) last season this seed produced at the rate of fifty-one bushels per acre, weighing forty pounds per bushel; he stated that it was much plumper and shorter in the grain than our common oats and was more like barley.

Another member remarked that his objection to using this seed was that in about four unfavorable seasons, or five or six favorable ones, the imported oats would be no heavier or more productive than our common grain.

This was ruled out as not being a valid objection, for if for three or four seasons we could obtain an increase in yield as well as weight, it would be found very profitable to use freshly-imported seed every year, or at least every other year.

Another objection urged against the use of Canada or English oats was that it shelled out more in the field than our common oats. Those who used this kind of seed stated that this fault only existed when the grain was allowed to become too ripe before it was cut, but that if cut soon enough it was no more liable to shell out (if as much) than our common kinds.

One objection urged and admitted was that it was more liable to lodge by storms or wind than our common oats.

It was also proved to be earlier, (often a week,) in ripening than common oats, and could often on this account be cut before the storms which usually take place about the time of harvesting oats.

One member asked whether as good oats could not be raised without plowing as are usually obtained by the most careful plowing.

Several of the members having tried this plan, they were all satisfied that in a *favorable season* as good oats might be raised by simply hoe-harrowing between the rows preparatory to drilling the seed, but that in a dry season the crop would suffer much more than that on carefully-plowed ground.

Another objection to the non-plowing plan is that

if we have the usual dry weather after harvest the unplowed oats stubble would be very difficult to plow and prepare properly for wheat. After considerable discussion it was decided that careful plowing and thorough preparation were as beneficial to the oats crop as to other crops, and that although good crops, had been raised, (both of wheat and oats,) yet it was not safe to depend on crops thus put in.

The Club were in favor unanimous of drilling in the seed instead of the broadcast and harrow system for several reasons, which were given by different members: 1st, on account of the saving of seed, an item amounting to at least three-quarters of a bushel per acre, for all were satisfied that two bushels and 1 peck drilled in is fully equivalent to three bushels sown broadcast. This saving alone will pay the expense of hiring a drill. A second advantage is that drilled oats is much less liable to lodge than when put in with the harrow; this also is a great advantage and can be properly appreciated by those who have cradled "down oats."

There was a great diversity of opinion as to how this crop should be harvested, some being in favor of using the reaper and others the cradle. Those who make use of the reaper were accustomed to throw the grain off in half grips, and in binding carry two together; the main objection urged against this practice was that in case of rain, these grips, though only half size, were very difficult to dry.

All the members united in the opinion that this crop should be cut quite green before there was any danger from shelling out, and be allowed to dry thoroughly in the grips or swathes before binding. The general opinion was that the grain when cut green would be found heavier, and this in addition to the saving from the prevention of "shelling out" would prove to be worthy of attention. All were of the opinion that, in proportion to the exhaustion of the soil, oats was the least profitable crop to the farmer, and if it could be thrown out of the rotation our land would improve faster.

"IN-IONS."—A certain pastor in this State is quite fond of gardening, and especially of onions. He had a fine parcel of them a year or two since, but night after night they disappeared. At length he accused his servant boy of making way with them. The boy was indignant that he should be suspected. To relieve himself of it, he resolved to watch and see who took them. Not long after the boy might be seen coming with great delight to his master with the exclamation, "Massa, me no take the In-ions—me found the thief—he no say I take them—he eat them—smell his breath"—presenting as he said this, a large polecat which he had caught. The sequel can be better imagined than described.—*Recorder*.

EXPERIMENTS.

Farmers often find fault with those who experiment. They say of a neighbor sometimes, "he is rather experimental;" but they should remember that every new truth is an experiment, to all those who have not tried it. Some one must be the first to vary from the trodden path, or we should still use a crooked stick instead of a plow. There is a class, however, who, upon hearing of any novelty in agriculture, at once try it, not on a square yard, but on their whole crop; such men are not worthy of being styled experimenters. But should a farmer at this day call himself practical and judicious in his calling, who, after having heard that in many sections of country corn is cultivated flat, without hill ing, and that potatoes are so cultivated, still continues to hill both without trying the experiment of flat cultivation even on a single hill, can such a man be rated as judicious? Is such a man to be called a practical farmer? Is he practical, who allows Lima beans to travel around a pole fifteen feet high, when the pinching off of the vine at five and a half feet high will produce double the crop of beans, and particularly before frost? Should he not try the experiment and see how it will answer? Many permit melons, cucumbers, etc., to run over the entire area of their soil, in long single vines, while others, by pinching off the runner-buds after the third rough leaf has formed, get their fruit early and of double size; Why should not this experiment be tried and adopted, if found true? Gooseberries mildew all over the country, but some have saved them by cutting every branch that is within five inches of another, and by mulching the surface with salt hay, or other cheap refuse material; is this not a fair experiment to try?

It has been frequently asserted that properly under-drained sub-soiled lands never suffer from drouth: who cannot name many farmers who lose their crops from drouth, at least once in ten years, and still have never experimented to know whether they can under-drain and sub-soil their land, for one-tenth the value of their crops, or whether such sub-soiling and under-draining will save them from drouth entirely? And those who doubt this fact, should they not make the experiment, or visit the farms of those who have, to know of its truth.

Thousands of acres of peach trees are grown by those who have never tried the shortening-in process, and cannot tell whether they will bear for a series of years longer for such practice, or not. Is it not a fair experiment to try this on a single tree at least? Are there not thousands of farmers in the United States who have never tried any other fertilizing material than barnyard manure? Should they not satisfy themselves by the experiment, whether or not

others may not be more cheaply used, and produce more profitable results?

Continually we hear it said, that those who surface plow five or six inches, have another farm under it which they have not developed. Should not such farmers experiment with the snb-soil plow to know if this be true or false. A bushel of carrots and a bushel of oats, are said to equal in effect, when fed to a horse, two bushels of oats. Now as sixteen times the number of bushels of carrots can be raised on an acre, than can possibly be grown of oats, should not those farmers who have never raised carrots, try the experiment, and thus ascertain if these assertions are true? Those who use hoes, and forks, etc., for cleansing row crops of weeds, have heard that the horse weeder would do the work of forty men with hoes, and that many have repudiated the use of the hoe altogether for root crops, why should they not try this experiment? It is said that one mowing machine will do the work of twenty men with scythes, and that one thrashing machine will do the work of a hundred men with flails; should not those who at present use flails, visit farms where mowing machines and thrashing machines are used, to ascertain if that experiment will not warrant them in the purchase of such tools?

Those who use barn-yards open and exposed to the winds and rains, and who permit the washings to run off to creeks and streams, have doubtless heard that with manure sheds, and properly arranged tanks retaining the drainage of the manure heap, and pumps, obtain better results than by the open barn-yard practice; should they not carefully review the operations of these experimenters, rather than satyrize that of which they have no knowledge? Experience is said to be the mother of wisdom—experiment is the father of truth.—*Ex.*

HAPPINESS.—Now let me tell you a secret—a secret worth knowing. This looking forward for enjoyment don't pay. From what we know of it, we would as soon chase butterflies for a living or bottle up moonshine for cloudy nights. The only true way to be happy is to take the drops of happiness as God gives them to us every day of our lives. The boy must learn to be happy while he is plodding over his lessons; the apprentice while he is learning his trade; the merchant while he is making his fortune. If he fails to learn this art, he will be sure to miss his enjoyment when he gains what he sighs for.

So live, that when thy summons come to join
The innumerable caravan, that moves
To that mysterious realm, where each shall take
His chamber in the silent halls of death,
Thou go not like the quarry slave at night
Scourged to his dungeon, but sustained and soothed
By an unfaltering trust, approach thy grave,
Like one who wraps the drapery of his couch
About him, and lies down to pleasant dreams.

HIGH MANURING.

Will high manuring pay? This is a question which in the practice of farming is becoming a very important one, and its decision will involve another important question, viz: whether farming, like other kinds of business, will give *profitable* employment for increased amounts of capital, or whether this amount is in a measure fixed and cannot be exceeded with a prospect of a fair interest for the principal so invested.

Or to put the question in a more open and easily-understood form: Can a farmer who has his farm entirely or partially paid, obtain a better interest by investing his earnings in artificial manures, than he can from Government or other popular loans?

I can now point out farmers who are (in addition to all the barnyard manure which they can manufacture) using from one thousand to fifteen hundred pounds of bone dust per acre, and to one in particular who in addition to a liberal coat of barnyard manure (such as would have satisfied most of us,) gave his wheat a top-dressing of *twelve hundred and seventy-five pounds of homemade superphosphate per acre.*

Some of his old-fashioned neighbors shake their heads and say "it won't pay," "can't do it long," &c. &c.; but he has been carrying on in the same place for several years, and can raise crops which surprise those who know what was taken off the land before he came into possession of it, and yet he says he does not think that he has reached the amount which will give the best interest for the capital invested.

His axiom is that he can afford to buy his farm over again, and with phosphate at \$65 per ton put on at the rate of twelve to thirteen hundred pounds per acre, his old fashioned neighbors seem to think he will not be long bringing about the above expenditure.

But what plays the mischief with us old fashioned folks is he has figures for all he does, (and "figures won't lie," a fashionable lady to the contrary notwithstanding,) and can show us doubters it all in black and white.

He can show that the above top-dressing, put on at a cost of \$40 per acre, will increase his crops as follows:

Corn, 20 bus. at \$1.00,	\$20.00
Oats, 20 bus. at .50,	10.00
Wheat, 15 bus. at 1.50,	22.50
Hay, 1 ton at \$15,	15.00
	\$67.50

And that in addition to the above increase, he will, after mowing twice, be able to stock the field at least one-third heavier than before it received the phosphate.

In addition to the above, by increasing his hay

crop he increases his ability to winter stock-cattle and fatten others on grain, and thus is continually in this ratio increasing his stock of farm-yard manure, which, although valuable, I have not counted in the above calculation.

He and I are both satisfied that the capital thus invested pays him at least twenty-five per cent. and lasts for seven or eight years, and at the end of that time leaves him an increased value in farm-yard manure fully equal to the amount of the investment.

The truth is, we look upon capital invested in this way as being so much chargeable to the land, and not as capital invested in a business in order to increase future profits. In this respect (as in many others,) the English agriculturists are far ahead of us; a renter in England will often expend one-half the first cost of the land during the first year of his lease. Our American farmer will at once ask "Why don't he buy?" My answer is that he forms no exception to the rule that all men are governed by self-interest, and he finds it more to his interest to invest his money in applying manure to land not his own than to have his money invested in the land as owner: the land belongs to some of the nobility who rent it to good men upon the long-lease system and give themselves no farther trouble about it.

I know of farmers who will read this article owning and carrying on good farms who have money invested in mortgages at four and five per cent., when they might as well have it invested in their own farms to a much greater advantage to themselves.

To show that I do not confine myself to theory alone, I will state that I have land now under crop on which in two years I have put two thousand pounds of bone dust and five hundred pounds of phosphate per acre, and next year expect to raise a crop, and can say that no investment ever paid me better.—*Cor. Germantown Telegraph.*

Alsike Clover and Potatoes.

The following we extract from Hon. Isaac Newton's report for 1865. The experiments were made on the Experimental Farm connected with the Agricultural Department:

In experiments with the clovers, the Alsike proved very satisfactory, growing with rank luxuriance in this climate, and remaining green and succulent to a late period in the season. It has been cut three times, and at the present writing, (November 15,) presents a fine appearance. The Lucerne was also grown with good success. The Esparset proved its remarkable adaptedness to the lighter soils. Experiments are in progress with a great variety of grasses, the results of which will be given hereafter.

Of potatoes, from Great Britain and the continent of Europe, as well as the best new varieties of this country, the Orono, Samaritan, and Early Goodrich, all of them native seedlings, proved worthy of standing first on the list.

THE MARYLAND FARMER

AT \$1.50 PER ANNUM,

PUBLISHED ON THE 1ST OF EACH MONTH,

BY

S. SANDS MILLS & CO.

No. 24 South Calvert Street.

CORNER OF MERCER,

BALTIMORE.

S. SANDS MILLS, } PUBLISHERS AND PROPRIETORS.
E. WHITMAN, }

BALTIMORE, APRIL 1, 1867.

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IN MEMORIAM.

It is our sad duty to record the death of Mr. Louis M. Whitman, of the firm of E. Whitman & Sons, of this city, at the early age of twenty-six years.

The beautiful Pagan aphorism—"Those whom the God's love die young," may, in a Christian sense and under the Christian dispensation, be justly applied to our deceased friend, whose quiet manners, gentle disposition, and fine qualities of mind and heart, endeared him most to those by whom he was best known. He was an affectionate son, a tender and loving friend and companion, earnest in the performance of the duties that devolved upon him, of irreproachable life, and seeking to do those things worthily which it best became him to do. It was the inscrutable decree of Providence that he should be taken away in the pride of his early manhood. The places that have known him will know him no more. A household light has been quenched; but, in the sacred privacy of home, and with those who knew and loved him, his many attractive qualities will be long remembered, and will "smell sweet and blossom in the dust."

THE AMERICAN FRUIT CULTURIST—Containing practical directions for the propagation and culture of fruit trees in the nursery, orchard and garden. By John J. Thomas: New York, William Wood & Co.

We are glad to learn from the preface to the present work that the popular demand for this excellent manual has been steadily kept up. This edition of the Fruit Culturist embraces the matured experience of its capable author. It is profusely illustrated with wood cuts; its descriptions are always happy, whilst the practical directions are so plain and clear that no man of ordinary intelligence can fail to understand them. We regard the American Culturist as one of the very best works of its class, and cordially commend it to the attention of all those who are in need of a book which they can confidently refer to, as a standard authority, on the subjects of which it treats. Price \$3.

Transactions of the New York State Agricultu-
ral Society for 1865.

We are indebted to Benjamin P. Johnson, Esq., the Secretary of the New York State Agricultural Society, for a copy of the above work. It contains a vast amount of information on rural affairs generally—is well illustrated and is not only in itself a meritorious work, but in its general getting up is an honor to the Society under whose auspices it has been published.

Second National Trial of Mowers, Reapers, Horse
Powers, &c., by the New York Agricultural
Society,

A thick pamphlet approaching from its size and the number of pages it contains almost to the dignity of a volume, has been sent us under the above title, by the courtesy of Mr. Johnson, the Secretary of the Society. It embraces a large number of interesting facts in relation to the qualities and powers of the machines put under trial, and whilst there may be others of equal merit that were not put in competition, the conclusions reached by the Judges in regard to those that were tried, may be accepted as a fair expression of the relative value of the contesting machines.

NOTICE TO SUBSCRIBERS.

There still remains a few names on our books whose term of subscription expired in December last. We have continued sending the FARMER, believing that they had neglected to remit the amount. We would remind them that publishing a magazine of the magnitude of ours is an expensive business.

Persons wishing to *discontinue* the FARMER can do so by returning the No. sent marked REFUSED.

COMMUNICATED.

ROTATION OF CROPS.

To the Editors Maryland Farmer :

My Dear Sirs :—Did "mortal human man" ever see such a winter as we have had, and still continue to have. Raining, snowing and freezing all the time, without even our beholding blue sky enough to "breech a Dutchman;" and roads only second to those about Evansport and Centerville, the first winter of the war. It really seems as if the sublunar tumults of the last four years had extended to the "upper regions," and they are as difficult to get "reconstructed" as we poor "reb's."

Being confined to the house by this particularly disagreeable day, I take up my pen to acknowledge the receipt of the March number of your paper, which failed to reach me at its usual time, and also to ask a little bit of advice; (supposing you to occupy somewhat the position of "pater familias" to your numerous subscribers, and to be always ready to give them aid and counsel.) My question is with regard to rotation of crops.

A high authority says, "it forms the basis of all successful agriculture whatever pains we take, whatever expenses we incur, in collecting instruments of husbandry, in accumulating and applying manures, and tilling the earth, all is to little purpose unless we superadd a succession of crops adapted to the nature of the soil, the laws of the climate, and to the physical character and commercial value of the articles raised." Then he says: "Never in any case permit two crops of the same kind or species, to follow each other."

Precisely so, Mr. Editor, but how are we to get at that best rotation? Take up the agricultural papers and there we see as many different plans of rotation as we find writers, and in some of them do we find less than two, and in most instances, three small grain crops following each other. Now as for our cultivating twenty, thirty, forty or fifty acres in turnips, beets, or potatoes, as an ameliorating crop it is out of the question, and all fal-dal as far as American Husbandry is concerned, and will be so until "niggers or poor white trash" get so thick that they will *weed wheat* or turnips, for ten cents a day as in many parts of Europe. And even if we made them, what on earth could a small farmer like myself do with five or ten thousand bushels of turnips, unless he owned half a dozen elephants, like Barnum—but he only had one—to consume them; and that too in a country where hundreds of bushels of potatoes can be bought from twenty-five to fifty cents per bushel. To raise turnips by the twenty acre lot when you can buy potatoes at those figures wouldn't pay exactly. But we *do* want to raise as much corn, wheat and oats as we can, and plenty of good timothy or orchard grass hay besides; for we can cut hay by machinery, but we cannot pull fodder in the same way. And at the same time we wish to raise all the *improved stock* our land will bear. In other words, we want the best rotation for a hay, grain and grazing farm. For grazing all the year round clover is not the very best grass, as it is neither early or late enough, though not to be surpassed in its season; nor does it without the best haying season and great difficulty in curing make the best hay, particularly for horses. And yet some clover is necessary (absolutely) to

turn in, to keep the land in good heart. At the same time we wish to keep as few working cattle and employ as little labor as possible, and yet keep the farm work well in hand. If every body's experience is like mine, the fewer hands they have, provided they do the work, the less trouble and annoyance are they subjected to, and consequently the better their tempers, healths, digestions and appetites.

Now what rotation of crops will best fulfil all these conditions. I suppose a young man has say, one hundred and sixty acres of land, exclusive of lots about the house for garden, &c.; three good horses, and one hand to assist, hired by the year, and hiring other aid only as he requires it. He wishes to plow as little as possible, and then at such times as that the plowing for one crop will not interfere with the plowing or cultivation of another: in short he wishes to "drive his work instead of his work driving him," always keeping his nose to the grindstone. How would this division and cultivation of his farm answer the conditions? I ask solely for advice, and not to advocate any especial system of my own. Suppose he divide his farm into eight fields of twenty acres each, and cultivate as follows: 1st. Oats; 2d. Corn; 3d. Wheat; 4th. Clover; 5th. Wheat; 6th. Timothy mowed; 7th. Timothy mowed; 8th. Pasture, then Oats again, and so on. He thus has one field in corn, one in oats and two in wheat, one of which is clover fallow, two mowed for hay and one pastured. The one pastured will be timothy sod to be well plowed in the fall, just before winter sets in, and which by the action of the winter frosts will be so friable in the spring that it will with ease, by harrowing or cultivating so as not to disturb the sod, form a soft and mellow seed bed for the oats to be put in the spring as soon in March or even latter part of February, as the weather and condition of ground will admit. The oat stubble to be plowed in in the spring as late before planting corn time as possible, having had as much manure hauled out as may be possible between the previous harvest, and during winter, as the farm maybe able to raise and the farmer able to haul. The land will probably be so light as not even to need harrowing before planting, and having borne a crop of oats on sod, will be much freer of weeds and easier to tend than corn on sod, unless unusually well worked previous to planting. As early in September as the corn will admit cut it down without topping or pulling blades, and set up in not very large shocks to cure for cattle feed in winter. Having cut the corn off *drill* in your wheat *without plowing*, (that would probably make it too light for wheat,) or if necessary run a large cultivator over it to lighten it up, but it will drill better to let the crab grass stand without breaking it up. The wheat will find the manure put in for the corn, and if drilled with one hundred and fifty pounds of guano to the acre, I don't see why as good a crop of wheat ought not to be made as any corn land is capable of making. In the spring sow clover seed on your wheat, and let nothing in the shape of stock run on it until it gets five or six inches high the following spring, and has been well plastered. This crop of clover to be fallowed for wheat with only one plowing, in July or August, finishing the plowing at least a fortnight before the seeding. Timothy to be sowed in the fall or spring as may suit best, and to be mowed the two following years; giving forty acres of hay. The last year to be pastured preparatory to put in oats. Of

course the more manure the better able the land will bear such a course of cropping or any other. The clover may, with advantage, be pastured for a while after it gets in bloom, and the hay fields may be grazed after the hay is cut off until frost; but not while wet, and never during winter. The straw and corn stalks to be fed to the stock cattle on the land when frozen, during the winter previous to pasturing the eighth field, which ought then to have a good sod on it and can not be much hurt by their trampling when frozen. Thus with three good plowings, and done at different seasons of the year, we have four crops made, not counting the large quantity of hay we ought to have if the land is well adapted to grass; and plenty of manure, particularly cow-tail, will make grass grow anywhere.

Do you think, Mr. Editor, our young farmer could live and improve his land in that way; or would he "rotate" out of house and home.

March 16, 1867.

FAUQUIER.

FROM NORTH CAROLINA.

The following we extract from a letter received from an esteemed correspondent in Wadesboro', N.C., dated March 5th, 1867.

Your excellent Magazine, I am glad to see, is beginning to get subscribers in this section together with the *Southern Cultivator*. * * * Our people begin to find that Baltimore is their *provision market*, and I hope they will see that that city is their market for Fertilizers, Agricultural Implements, &c.

Our planters are beginning to change their system somewhat—less hands, and less land, but more thorough tillage and manuring. While many thought of adopting this system, they were not quite prepared for it this year. But quite unexpectedly circumstances have forced them to it. A very large number of the able-bodied freedmen, since the first of January, have sought homes in Florida, Georgia, Mississippi and Texas, causing quite a stringency in our labor supply. Besides these, others have gone into the turpentine region. Hence the resort to the system above mentioned. In the end it will be all the better for us.

Quite recently I saw an article from one of your city papers, extensively copied in our papers, calling attention to emigrants to the advantages of lands in this State. In the main the article was well enough, but in some things incorrect. The extreme eastern counties of the State, in which the fertile swamp lands lie, are not, with the exception of a few spots, adapted to the cultivation of cotton—such as Hyde, Tyrrell, &c. But coming west, into Pitt, Lenoir, Green, Edgecombe, Halifax, Wilson, &c., the lands are excellent. But one great drawback to persons not raised in those sections settling in them is their liability to malarial diseases—bilious and ague. But in this section—and through what might be called the "riage regime"—where the heavy lands join the sand basin of the Atlantic slope—and in this county in particular—we are free from all those diseases, while the land is pre-eminently adapted to cotton. * * * We hope when the facts all come to be known to have an accession to our population. Lands can be bought cheap for cash. Owing to the want of railroad facilities we have been cut off, to a great extent, from the free use of fertilizers, but we hope in a year, at least, to have our railroad, (from Wilmington to Charlotte)

in full operation through the county, and in two years another crossing it directly from Cheraw, S.C., (in direct railroad communication with Charleston,) to the coal fields of North Carolina, and thence to Raleigh, and planters and settlers will then have opportunities to get fertilizers *ad libitum*.

We are suffering much from the drought of last year, that is in the shortness of the crops of both cotton and corn; but owing to the peculiar winter we have had, old farmers are anticipating this year glorious crops.

I am afraid, however, we shall have no fruit. February has been very spring-like and vegetation generally has started. Fruit trees—plums, peaches, apricots, &c.—have been in bloom for two weeks and better, and the hills are green with grass. Many trees are also putting forth their leaves.

FOR THE MARYLAND FARMER.

FILLING GULLIES.

My article in the February No. of the FARMER on "Filling Gullies," having called out numerous letters of inquiry from improving farmers as to "how the great difficulty is to be overcome of plowing the first furrow on the brow of a steep bank of a gully," I will, with your permission, answer all through the FARMER. Like "setting the egg on the little end," it is very simple, when we know how.

My practice is to make a strong washer with a hook on it, and place it on the end of a strong cart axle, and attach the plow to it, using a short chain. Using the team tandem, any number required for the work can be attached to the cart, and while the team can be kept a proper distance from the brink of the bank, the wheel of the cart may run sufficiently near to plow as close as is desirable.

Having plowed a few furrows in this way, the banks will soon be reduced to a shape on which the team can travel without difficulty, and what seemed at first, apparently impracticable, is rendered simple and easy.

Truly yours,

J. WILKINSON.

DISINFECTING AGENTS.—Either of the following will answer the purpose, while they cost but a trifle:

1. One pint of the liquor of chloride of zinc, in one pailful of water, and one pound of charcoal of lime in another pailful of water. This is perhaps the most effective of anything that can be used, and when thrown upon decayed vegetable matter of any description, will effectually destroy all offensive odor.

2. Three or four pounds of sulphate of iron (copperas) dissolved in a pailful of water will, in many cases, be sufficient to remove all offensive odors.

3. Chloride of lime is better to scatter about damp places, in yards, in damp cellars, and upon heaps of filth.—*Scientific American*.

THE NEW YORK MERCANTILE JOURNAL.—We have before called attention to this excellent journal, and take pleasure in doing so again. It is probably the most complete and reliable Mercantile newspaper published in this country. It gives a weekly price list of all articles bought and sold by Country or City Merchants, and is most reliable and trustworthy in all its quotations. We advise all our Merchants to send for a copy, and we do not believe they will afterwards do without its weekly visits. Published every Thursday, at No. 2 Franklin Square, and 350 Pearl street, New York City. Subscription price \$3.00 per year.

IMPROVEMENT OF SANDY SOILS.

THE SOUTHERN FIELD PEA.

BY DR. J. S. HOUGHTON.

THE FIELD PEA, OR COW PEA, has been employed very extensively, and with much success, in the Southern States, as a renovator of sandy soils. It is a leguminous plant, and belongs to the clover family. It grows with great rapidity, in the poorest soil, sending up a stout spreading vine, with a stalk like a tomato plant, and sends its roots very deeply into a favorable soil—as deep as clover does. It needs no manure to produce a large amount of green vegetable matter, but it is of course greatly benefited by a dressing of manure of any kind, but especially lime, land plaster, muck, or bone dust.

There are several varieties of the Cow Pea. The White Pea, with a black eye, known in New Jersey as the "Crowder," is perhaps the most common.—The "Black" North Carolina pea is probably the earliest. The Yellow, or Clay pea, is a coarse field pea, extensively grown. The Black pea is much used in the South, in making pea soup, and especially mock-turtle soup, partly for its color. All the varieties of the pea are much used in the South as food, by the negroes, and also by the poorer whites; and they form, of course, a very nutritious diet.

The pods of these peas are often six or eight inches long, and look very much like our common Snap Beans.

The vines grow very rapidly in a favorable season. In ninety days after planting the seed, they will produce as much green material for turning under, as a clover sod two years old. They may be sown broad-cast or in drills. When sown in drills it is customary to drop five or six peas together in hills say two feet or more apart. They will then grow in clusters and can be kept clean with less trouble than if sown along the whole length of the drill.

I have grown this pea in New Jersey, and in Pennsylvania, with satisfactory results. I regard it as a very valuable means of adding vegetable matter to the soil.

It may be well to mention that the vines are very rank and strong, and it requires a strong team with a heavy plow and chain to turn the vines under.—It is not, however, thought to be requisite that the whole vine should be buried under the soil. As good results, it is believed, are obtained, when the vines are only half buried. The vines should be plowed down just as they come into flower and before the pods are generally formed. They are then more tender, and the growth has not exhausted the soil.

The vines are rich in silica, magnesia, and carbon, and also contain much ammonia.

As a preparation of sandy soil for Rye, it is believed to be the cheapest and best method of manuring. In the climate of New Jersey, table peas or some other early spring crop might be grown before planting the field pea, and still leave plenty of time to secure a crop of vines to turn under before seeding to Rye.

In the Southern States, the planters sow Field Peas in the corn-field, at the last hoeing, or cultivating, and they obtain a large crop of vines and peas, without injury to the corn.

The vines, if properly cured, make hay nearly as good as clover, and the peas form excellent feed for working horses.

To make hay of the vines they should be cut before the peas are fully formed, or they will be tough, harsh, and tasteless. There is the same difficulty in curing the vines that there is in curing succulent corn-fodder—but it can be done by hanging the vines on a pole or fence. When fodder is scarce they will probably be found more valuable than corn-fodder.

The Peas here described may generally be purchased in Baltimore, Md., in Wilmington, N. C., and in other Southern cities. Before the war, they sold at about \$1.12, to \$1.50 per bushel. At that price it was cheaper for a Northern cultivator to buy the seed than to raise it. It was not thought to pay the Southern planter. In some instances the peas were picked by hand, but generally, the vines were gathered and threshed.

My impression is, that the usefulness of the Field Pea has never been justly estimated in New Jersey. If planted year after year, on a poor soil, and turned under, with the addition of a little lime and plaster, it would be, I think, the cheapest and most efficient way to improve a sandy soil deficient in vegetable matter.—*Hammondton Culturist.*

Green Manuring Light Soils.

The sensible article of Dr. Houghton, in the February number of the *Culturist*, on the "Improvement of Sandy Soils," deserves, as I hope it will receive, the earnest attention of your readers.

I am aware that there are those who look upon the idea of deriving any advantage from the turning of a crop of any kind under the same soil, and in the same condition in which it was grown, with the hope of obtaining any fertilizing results, as a downright absurdity. But facts are stubborn things, and facts sustain the theory at every point. We all know that the inorganic substances of plants are derived from the soil, and that the organic portions are derived from the atmosphere and water. It is also equally well ascertained that the plants which are best adapted to green manuring, obtain a very large

proportion of their material from the atmosphere. This is especially the case with all the leguminous plants. All this atmospheric addition is, therefore, so much clear gain.

Another well established fact is, that leguminous plants, such as clover, lucerne, peas, &c., thrive admirably upon our light sandy loams. Here, then, we have offered us freely, the very material which our soils most need, vegetable matter. We have the mineral element in superabundance, and require the vegetable matters which these plants afford, to render our soils the easiest tilled, and as profitably productive as any on the continent. Why not then, grow these crops, and turning them under, when at the most succulent stage of their growth, secure what we so much desire and absolutely need, a well balanced soil?

If there be those who query, why the ripened plant would not answer, as well as the green, I answer, that the object sought, is rapid decomposition, and this certainly takes place in the green, succulent plant, much sooner than in the mature, or dry one.

The subject is one of vital importance, and I hope to see it presented in your columns so frequently and with such force of argument, as will carry conviction with it to the mind of all skeptics in regard to the great value of green manuring, upon the light soils of New Jersey.—B. W. C.—*In Culturist.*

PREPARATION OF CLOVER SEED.

It is not unfrequently the case that clover seed fails to germinate,—thereby causing serious loss and disappointment to the farmer, who it will be perceived not only sustains an actual loss involving the price paid for seed, *in cash*, but a much more serious one in the failure of the anticipated crop, and the idleness and non-profit of the soil on which the seed was sown. And even when the seed is not impaired in its vital principle or energy, it is fair to presume—adopting results as data—that not more than one-half, certainly, of the clover seed sown, ever produces plants. This arises from the fact that a large portion of it is prevented from germinating for want of moisture, or of a certain principle in the soil which appears to be necessary to stimulate the seed, and give it a healthy start. The process I have adopted is predicated on the assumed fact above suggested, viz: that not more than one-half the clover seed sowed ever produces plants, and may be detailed familiarly as follows:

The seed is in the first place thoroughly wet with a good strong pickle from the meat barrel, enough being applied to wet the floor on which it is spread. It is then gathered into a heap, and allowed to remain one day to swell. If the temperature of the

atmosphere should be low, it will be judicious to warn the pickle before applying it, and to give the seed another salting the next day. After this spread it evenly, about one inch thick over the floor, and in thirty-six hours each seed will be found covered with a thin crust of salt, which will enlarge the size of the seed, and adhere to it so firmly as not to be easily rubbed off by the hand. When it is wanted for sowing, moisten again with pickle, spread it on a dry floor and sprinkle on three quarts of finely ground plaster of Paris to every half bushel of seed. This will adhere to the kernels, and again increase the size of the seed, so that with the swelling, the coating of salt and the adhering gypsum, one bushel will be increased in bulk to the volume of two.—Should anything occur to render the immediate sowing of it unadvisable, after it is thus prepared, remove it to your cellar and keep it moist till a favorable time arrives. The sowing may be performed in the ordinary way, with the hand.—Cor. Germantown Telegraph.

WIDOW C.

[Translated from the Welsh of Peco Lynz.]

Over the flag-embedded street
Comes mingling now and then
The chirping sound of women's feet,
With the heavier tread of men.
Trophies of fashion, rich and rare,
Flash by in their varied light—
But I sigh for the glimpse of a garment there
More dark than the wing of night.
For it wraps the form of Widow C.,
Who throws so sly a glance at me,
That, oh! I think my late must be
In the dark brown eyes of Widow C.

Gliding, swan-like—plump or spare—
Eyes of light and forms of grace—
'Wildering, mystic globes of hair
Netted in golden lace.
Skirts of gold, or bodice blue—
Braided basque has no charms for me
Like that sombre suit of sable hue
So becoming to Widow C.

Oh! never saw I such rogueish locks
Coming from buttons and gimp and hooks
Or female jacket, where pockets be,
Like those I get from the Widow C.

Raven hair, and forehead white
As lilies where the bee sucks honey,
None would judge by her laugh so light,
She ever committed matrimony.
Cheeks as fresh as the new blown rose ;
Lips as red as ripe cherries be ;
Straight and fair is her Grecian nose,
That never was cocked up at me.

I said she looked well in a suit of black,
(Oh! could I take that flattery back,)
And take it off, and she take me
With a better name than Widow C.

FOOD AND WARMTH.—It should always be remembered that animals allowed to stand and shiver in the open air, or in a barn full of cracks and holes, need and eat a very large amount of extra food to keep up bodily heat, flesh and comfort.

An exchange asks if we can throw any light on kissing. We don't want to, the thing goes just as well in the dark.

Horticultural.

The following we take from an old number of the "*Cultivator*," for November, 1844. It is sometimes well to republish matter from old periodicals, which are as true now as when written—as for instance Mr. Thomas' article on the cultivation of fruit orchards—a subject of great and growing interest to our people, and not well understood.

CULTIVATE YOUR FRUIT TREES.

The influence of the cultivation of the soil on fruit trees, appears to be less known and appreciated than any thing else of the kind equally important, which has been practiced since the time of Hesiod and Homer. Persons who purchase fine fruit trees, appear to have more or less of five different objects in view, which are the following, to wit:

1. To kill the trees at once.
2. To kill them by inches.
3. To keep them alive, with the hope that they may bear small and imperfect fruit in ten or twenty years.

4. To make them grow vigorously for a year or two, and afterwards neglect them, reducing the fruit to one-third in quantity and one-tenth in quality of what it should and might be.

5. To keep them well cultivated constantly during the term of their natural lives, and as a consequence receiving full crops, and of the most delicious quality.

1. Although many *appear* to pursue the first of the above named objects, they probably do not really intend it. They are, however, much more successful than they intend to be in killing their trees, by drying them in the sun, freezing them in the cold, bruising them, or otherwise treating them as already dead while life yet remains. A large number pursue this course.

2. Others avoid these attempts to produce death, but practice another kind, which is, to crowd the roots of the trees when setting them out, into very small holes dug in hard soil, and then to suffer them to perish gradually from such careless transplanting and subsequent lack of care and culture. A much larger number follow this practice.

3. Others again transplant *well*—but that is all. This done, they consider the whole work as finished. The trees are suffered to become choked with grass, weeds, or crops of grain—some live and linger, and others die from discouragement. An intelligent friend purchased fifty very fine fruit trees, handsomely rooted, and of vigorous growth; they were well set out in a field occupied with a heavy crop of clover and timothy. The following summer was very dry, and the grass crop crowded them hard on

every side—most of them necessarily perished. The browsing of cattle the next winter completed the work for the rest—it would have been cheaper to have thrown them away at once. Another person, a neighbor to the first, bought sixty trees, of much worse quality in growth; he set them out well, and kept them well cultivated with a crop of potatoes. He lost but one in the sixty, and by pursuing the same course of raising among them, low hoed crops, his trees now promise to give him loads of rich peaches, before the dead stubs of the trees of his neighbor have disappeared from the grounds. Another neighbor last spring bought fifty fine trees. A few days since I passed his house, and he said to me, "I thought a crop of wheat was one of the best for young peach trees?"

"O no," said I, "it is one of the very *worst*; avoid all *sown* crops, and occupy the ground only with low, hoed crops, as potatoes, ruta-bagas, carrots, and the like."

"Well," answered he, "I have found it so—my fifty peach trees all lived, but I have lost one year of their growth by my want of knowledge."

I examined his trees—they had been well set out, in a fine soil, all the rows but one, had stood in a field of wheat, but the one excepted was hoed with a crop of potatoes. The result was very striking. Of the trees that stood among the wheat, some had made shoots the present summer *an inch long*, some *two inches*, and a very few *five or six inches*. On nearly every one that grew with the potatoes, new shoots *a foot and a half* could be found, and on some, the growth had been *two feet, two and a half, and three feet*. Other cases have furnished nearly as decisive contrasts.

4 and 5. An eminent cultivator of fine fruit, whose trees have borne for many years, says in a late letter, "My fruit garden would be worth twice as much as it is, if the trees had been planted in thick rows* two rods apart, so that I could have cultivated them with the plow. Unless fruit grows on thrifty trees, we can form no proper judgment of it. Some that we have *cultivated* this season, after a long neglect, seem like *new kinds*, and the flavor is in proportion to the size." Large trees often stand in thick grass, and poor crops and poor fruit can hardly fail to result; and the nurseryman who sold them is sometimes pronounced a scoundrel for having furnished such despicable stuff.

"But," exclaims some one, "are we always to

*The "thick rows" here spoken of, are meant to contain fruit trees standing six to ten feet apart in the row, so that the plow may be passed on each side parallel with the rows, the last few furrows in immediate contact with the trees to be plowed with two horses, one before the other, a boy riding the forward one. A very short whipple-tree should be used on the plow, and long traces attached to admit the plowman steering far to the right or left as necessity may require.

be troubled with cultivating and taking care of our trees as long as we live?" Exactly. This is the condition of living and enjoying the fruits of the earth, which has existed these last six thousand years. Besides, if this labor gives a return of a hundred fold, who ought to regret it? If my orchard, yielding a hundred bushels now, of poor fruit, will, by putting a hoed crop and some manure into it, more than double its products, and greatly improve them in quality, where is my loss? Would it be grateful in me to complain of a little care and attention with so great a gain? Labor cannot be avoided, but it brings its reward.

J. J. THOMAS.

THE RASPBERRY AND BLACKBERRY.

The following we copy from the new edition of "*The American Fruit Culturist*," by J. J. Thomas, and published by Wm. Wood & Co., New York:

PROPAGATION.—Most varieties are increased with great facilities by suckers; a few, as the American Black and American White, are propagated readily by layers, the tips of the recurred branches when slightly buried, soon taking root. New varieties are raised from seeds, and come into bearing the second year.

The soil for the raspberry should be rich and approaching moist, and an admixture of swamp muck is useful. A strong deep loam is the only soil from which a full crop may be expected every season. If sandy or gravelly, or a stiff, cold clay, it cannot be relied upon. But the most important requisite is *depth*, only to be attained by deep trenching, and which will go far towards affording a remedy for any natural defect of the soil. The most tender varieties may be raised on higher, drier, and firmer spots of ground, being there less liable to severe frosts in cases where winter covering cannot be applied.

The culture is simple. It consists in pruning each spring, keeping all weeds and grass well cleared away from the stems, and the soil mellow and clean by cultivation.

The pruning should be done early in spring. It consists in cutting out all but the last year's growth, together with all the smaller shoots, even with the ground, leaving only five or six of the last summer's canes for future bearing. These are to be cut off three or four feet high, and neatly tied together, using a stake to stiffen them if necessary. In tying, they should be allowed to spread slightly at the top, in the form of a wine glass. The distance asunder should be about four feet. Another mode is to stretch a wire along the row, spread the canes out in contact with it, and secure them by cord or wire loops.

In many parts of the Northern States, some tender varieties need winter protection. This is easily given, by covering the stems, when prostrate, very thinly with earth; placing a small mound of earth against the bottom of the stems before laying them down, to bend upon and prevent breaking. This covering is removed early in spring. It will be found to prove very useful, even when not necessary to prevent winter-killing, by rendering the crop larger and more certain.

A plantation of raspberries will continue in bearing five or six years, when it should be renewed. If it remain longer, the fruit becomes small, and the crop gradually declines.

THE BLACKBERRY.

The Blackberry requires nearly the same treatment as the Raspberry; but being a more rampant grower it should have more room, and needs more pruning or pinching. The distances of the rows may be six to eight feet apart, and the plants, if kept single, two feet in the row. Sometimes they are allowed to grow thickly or in a continuous line, in which case they should be kept well cultivated and properly pruned.

Constant cultivation is always better than much manuring.

Pruning the blackberry is commonly but little understood. We hear complaints of the rambling and straggling growth of this bush, etc., extending across alleys, tearing dresses, at the same time proving unproductive. This is owing to a neglect of summer pruning. As soon as the new shoots have reached three and a half feet in height, the ends should be pinched off with the thumb and finger, which will cause the protrusion of laterals. These in turn are to be pinched off when they have grown eighteen inches. It will be necessary to pass along the rows every two weeks in doing this work, as new shoots will be constantly thrown out during the entire summer. The plants being thus kept within bounds, will present neat, compact, and productive bushes, instead of unproductive stragglers, if left untouched.

A company for the cultivation of cranberries on an extensive scale has just been formed in Hammon-ton, off from a portion of the Atsion tract, with a capital of \$150,000. A large fruit cannery establishment is also to be erected.—*N. J. Courier.*

A Little Gem.

There is not a heath, however rude,
But has some little flower
To brighten up its solitude
And scent the evening hour.
There's not a heart, however cast,
By grief and sorrow down,
But has some memory of the past,
To love, and call its own.

The following brief articles on "Peaches" and "Potatoes," we clip from an old number of the "Albany Cultivator," published in 1844. Mr. Tucker is now, as also when they were published, editor of the *Cultivator*, and Mr. Thomas, is assistant editor, the latter a great fruit authority—and we would take the liberty of calling upon them to inform us whether or not these varieties are now cultivated in that section, and under what names. Allen Peach is not described by Downing, but ought to be very valuable, if it has retained its original character. And so of the potatoe, which was not at that time named. If it has not degenerated it would be in our State invaluable and fully sized by the 20th of June. Can the editors of the *Country Gentleman* and *Cultivator* throw any light on the subject?

PEACHES.—The editor of the Boston *Cultivator* gives an account of a visit to the "Allen neighborhood" in Walpole, where he found some of the finest peach orchards in the country. He states the following singular fact in relation to a variety of the peach reproducing its kind. He says: "The principal peach cultivated here is the Allen peach, which is a seedling that has been propagated from the seed more than 40 years, through many generations of trees, always producing about the same, without budding or grafting. There is no more deviation from the original or standard kind, than there is in the Baldwin apple, or other varieties of fruit propagated by budding and grafting. We saw some trees bearing full that were 28 years old, and they had borne well from their youth to their old age." It is said to be a good peach—well deserving a place among the best—color light, with a red cheek—a free stone.

CHOICE POTATOES.—In the October number, we spoke of a superior kind of early potatoes, grown on Professor Hall's place, near this city. We acknowledge the receipt of a sample of these potatoes, which may be seen at this office. They are white, of good size and excellent quality—are very early, and yield well. They produced the past season, on soil of medium quality, near three hundred bushels per acre, and were wholly ripe before the *blast*, which generally struck the potatoes in this region, came on—being fit for market by the fourth of July.

THE AMERICAN JOURNAL OF HORTICULTURE.—We have received from the publishers, Messrs. Tilton & Co., Boston, the March number of this new Horticultural Magazine, the success of which has been thus far remarkable. The publishers, in their introduction, say, "An improvement and progress are to be our aim, we trust each month may be an improvement on the past;" and they well redeem their promise. The March number comes before us an improvement on the February, as that was upon the January. The information is more varied, as well as of wider range.—The illustrations and mechanical execution are, if possible, superior to those of former numbers. The magazine is wonderfully cheap,—\$3.00 per annum,—giving nearly eight hundred pages in the year.

SEASONABLE HINTS.

. From the March number of the *Horticulturist* we glean the following hints:

WHEN trimming grass edgings along pathways or around flower beds and borders, be careful to do the work in such manner that, when finished, the grass will appear as it were to line the path or border, and not rise from it, staring, with a raw earthy look of one or two precipitous inches. To our eye, nothing exhibits less of landscape knowledge and true taste than a raw edge separating the grass from the road line. It is only one remove, and that a straight one, from the practice of placing a brick coping.

PEACH TREES IN POTS.—J. R. Comstock, Dutchess County, N. Y., writes that he "practices with success growing peach-trees in pots and tubs, and wintering them in the cellar, from whence they are taken in spring, after all danger of frosts, to the specimen orchard out doors, and there plunged in the earth to the tops of the pots or tubs."

A MIXTURE of three parts fine charcoal, two parts bone meal, and one part plaster (gypsum,) applied in quantity of about two to four quarts to the roots of a tree or vine when planting, we have found to fully repay the cost in increased vigor and growth during the season.

Poultry manure, or guano mixed with twice its volume of plaster, causes the manure to decompose more rapidly than when unmixed, and of course allows its valuable parts to be sooner and more readily absorbed by the plants to which it is applied as a stimulant.

THE BEST WATERMELON.—Mr. J. R. Comstock writes us that he has been growing watermelons yearly for fifteen years, having during that time tried many varieties, but that one called the "Strawberry" he has always found "best."

REMOVE WINTER COVERING as soon as the frost has left the ground, otherwise there is liability of many leaves and buds becoming injured from too close confinement by the packing of the mulch.

Mounds of earth that have been built around the trees to protect them from mice, should be leveled down.

RASPBERRIES that were left unpruned last fall should be at once attended to, and all the old wood and young, slender, weakly shoots cut out. Leave four to six good strong canes to each hill, but head off their tops about one-fourth of their height.

ONE pound of potash to six gallons of water is a good wash to apply to trees on whose bodies or limbs are insects, moss, etc.

In pruning currant bushes, remember that while the red and white varieties produce their fruit on spurs or small snags upon the old wood as well as upon the growth of last season, the Black Currant produces most of its fruit upon the wood of the preceding year, and that while it will answer to shorten back the growth on the red and white varieties, it is better to prune the black by simply thinning out the weak shoots.

MULCH all newly-planted trees. If none other is at hand, take that away from trees planted last year, as they are now partially established and better able to bear drought, heat, dry, cracked soil, etc., than the newly-planted tree. It is best, however, to provide new mulch for all the newly-planted trees.

AMONG trees to be grafted, the cherry demands first attention, next the plum, finishing with pears and apples.

Be careful to remove all suckers that appear around the roots of trees—cut clean with a sharp knife.

REMEMBER that the earlier all kinds of trees and shrubs, except evergreens, are transplanted, the greater is their chance of growth and success, because of the necessity of the broken roots being healed and new ones formed, before warm suns and showers burst the buds and cause the leaves to draw nourishment from them.

ALL the good old June Roses, like George the Fourth, Tourterelle, etc., make better growths and give more and finer blooms to have one half of the length of last year's wood cut off. Dig around them, and apply liberally well-rotted manure.

If you are about to lay down an orchard to grass, do so with grass seed alone. A crop of rye, oats, etc., will do more in one season to check the growth of trees, than can be remedied in three years thereafter under the best cultivation.

CLEAN up strawberry beds before they commence flowering. After that time leave them alone, as a light brush or touch when in flower will often destroy impregnation, and of course the fruit.

HYBRID PERPETUAL ROSES we always cut down to two or three buds from the ground, depending on the new growth to give us flowers, commencing just as the June Roses are done, and continuing on until December.

INSECTS will not be as destructive in an orchard well cultivated, so much as one that is left in grass.

RECEIVED.—From D. McMillan, Xenia, Greene county, Ohio, catalogue of his celebrated Short-horned Herd.

From J. Burkholder & Wilson, Bendersville, Adams Co., Pa., catalogue of their Vineyard and Nursery.

The Poultry House.

FEEDING FOWLS.

There is nothing gained by feeding your laying hens as though you were fattening them for market. Especially will this remark apply while they are running out. This thing of over-eating is hurtful to anything that eats. It is natural for a fowl to be on the look-out the most of her time, and swallow a grain at a time as it is found, and thrive best living in this manner. Not so with man or beast. It is best for the latter to eat meals at certain periods, and not eat a particle between meals.

Feed fowls a little at a time and often. Grown fowls should not be fed less than three times per day. I find if I over-feed fowls, they go off in some corner and sit down and chill, if the weather is cold; whereas, had I given them half as much, they would continue moving round, feeling well, and seemingly getting that exercise that their nature requires, by keeping their blood in healthy action. By this means my hens are better off in every respect, one-half of my grain is saved, and as great a per centage of eggs is secured; and at present prices of grain, it is an object to know how to feed judiciously.—*Seever's New Poultry Book.*

HENS.

After all that has been done for the improvement of fowls, not more than one-half of those who keep hens succeed in having them lay through the year. There are some who always do succeed and of course reap large profits. What is the secret of success? It is neither difficult nor beyond the reach of every family who occupies a few rods of land. The hen house need not be expensive, but should be so constructed as to be neither too hot in summer, nor too cold in winter. It should be washed with a mixture of lime and salt on the inside. Select the best breeds and put several kinds together; feed regularly, and let them always have sufficient clean water. They should have both animal and vegetable food, plenty of pounded mortar, brick, burned bones, &c. Bones not burned and pulverized make a most excellent food for laying hens. Give them peppers and pickles. They need acids to prevent their becoming too fat. Pickled peppers are better than cayenne. A slight seasoning of salt in their food is good. Sand or ashes should be provided for them to dust themselves in. If they wish to set let them stand in a tub or barrel with one or two inches of water for a day or two. Above all they should have regular attention every day. In this way some do succeed in having their hens lay the year round. We should be glad to find more accomplishing the same thing; as it would contribute not only to the health of the family, but be of great advantage to the pocket.—*N. E. Farmer.*

The Dairy.

MONITOR MILK CAN.



Mills & Sons, 18 Water street, Baltimore.

BUTTER MAKING.

As I have read a good deal in the *Rural* on making butter, I will give my plan. As to scalding milk, it does more harm than good, as it spoils the taste of the milk, and makes the butter white, and does not make the least difference about the butter coming quick. Now, the way to make butter good at all times of the year, is very simple and easy. The first things are clean pans, pails and strainer; the next are clean butter bowls and churn. Never let the cream stand in the churn over ten minutes, before it is churned, nor let the buttermilk stand in the churn after the butter is taken out. Never let the butter stand in the bowl over one night. Now, as to the milk of the cows, after eating turnips or carrots. When the milk is brought in, pour into the pail boiling water, according to the quantity of milk. If you have six or eight quarts, pour in two of water, and let it stand till it is done steaming, and all the unpleasant taste will be removed. Let the milk stand just long enough to have all the cream rise, which will be forty-eight hours at the longest, and not wait for the milk to thicken, as no cream will rise after the milk is sour; then as you skim your milk put it in a clean stone vessel, and not cover tight, stirring lightly every time the cream is added, and the night before churning stir thoroughly till all is even, and never let it stand an hour after it is fit to be churned. If it is cold, add hot water gradually till of the right temperature. In winter have your pantry moderately warm. If it is too warm the cream will dry over, and the milk will sour before the cream is raised. If it is

too cold by turns, and then warm, the cream will be bitter, and it will not rise as evenly as it will by keeping the room at an even temperature. If in a warmer day, or when there is more fire, let the window be open and all will be right. If these rules are followed, I will warrant good butter at all times.

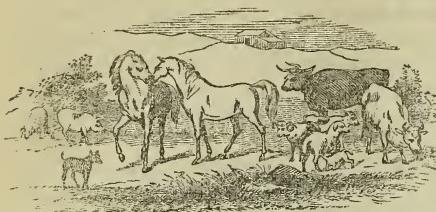
Never keep butter in a perfectly tight jar, or in a tin dish; but put it on a clean plate, and cover with a cloth; set it in a cool place if you don't want musty butter, and the more cool air it gets the better. I have followed this plan twelve years, and never in the whole time had the least strong or musty butter. I am not a farmer's wife; but I make my own butter, and was brought up among the old Dutchess county farmers, and they know how to make butter pretty well.—*Mrs. J. H. Wheeler, in Rural American.*

The Proper Temperature for Churning Butter.

It has long been known that the churning of butter is simply a mechanical operation, working no chemical change in the constituents of the cream. The butter exists in the milk, forming $4\frac{1}{2}$ to $5\frac{1}{2}$ per cent. of its weight, but each little globule is inclosed in an exceedingly delicate membrane, which prevents the several globules from adhering together. By the process of churning these membranes are worn or broken, thus allowing the several globules to come together in a single mass. At a temperature below about 60° this union will not take place, while a few degrees higher temperature the casein of the milk will mingle with the butter, giving the butter a white color and the flavor of cheese. The best butter is obtained at the lowest temperature at which the butter will come and this is variously stated at from 55° to 66° . This difference of opinion may result from difference in the samples of milk tried by different observers, or it may be due to the fact that in some cases the temperature was observed before the churning commenced, and then the temperature was raised several degrees by the churning. It was stated in a recent number of the *Mechanics' Magazine*, that Mr. Rennie raised the temperature of water, by simply churning it, to the boiling point. While engaged in experimenting on the evolution of heat by the agitation of water, he put ten pound of water into a churn which revolved at the rate of 232 revolutions per minute; the temperature of the water rose to the boiling point, and an egg was boiled hard in it in six minutes.

If the farmers throughout the country would buy thermometers for the purpose, and would always have their cream at 60° to 66° temperature when they churn it, the average quality of our butter would be very greatly improved and an immense amount of labor in churning would be saved. Thermometers without cases are most suitable for measuring the temperature of liquids, as they may be easily cleaned after immersion.

Live Stock Register.



FEEDING AND MANAGEMENT OF COWS.

The variations in the yield of milch cows, are caused more by the variations in the nutritive elements of their food than by a change of the form in which it is given. The first object is to afford a full supply of the elements of food adapted to the *maintenance*, and also to the *produce* of the animal. The less cows are exposed to the cold of winter the better. They eat less, thrive better, and give more milk when kept housed all the time, than when exposed to the cold. A writer upon this subject mentions a case where a herd of cows which had been usually supplied from troughs and pipes in the stalls, were, on account of an obstruction in the pipes, obliged to be turned out twice a day to be watered in the yard. The quantity of milk instantly decreased, and in three days time the falling off became very considerable. After the pipes were mended and the cows again watered as before, in their stalls, the flow of milk returned. This, however, will be governed much by the weather; for on mild days we would advise, not only to let them out, but to allow them to remain out a short period for exercise. In order to have cows milk well, regularity is next in importance to a full supply of wholesome and nutritious food. The stomach of an animal in perfect health, is a very nice chronometer, and it is of the utmost importance to observe regular hours in feeding, cleaning, and milking; on this point, very many of our farmers are sadly at fault—feeding when it best suits them. Thus, the cattle are constantly looking for food and kept in a restless condition, while if regular hours were strictly observed they know exactly when their feeding time arrives and rest quietly till then. Individuals must be governed much by circumstances, both in respect to the particular kinds of feed at different seasons of the year, and the system of feeding. One of the best courses to insure a good flow of milk, is to feed at the time of milking or directly after, with cut feed, such as corn, oats, or cornstalks mixed with warm water, and at all cold seasons it is better to have their food and drink warm, for if given at milking

time the cows will generally give down the milk more readily. In winter the best food for cows in milk will be good, sweet, meadow hay, a part of which should be moist; all inferior hay should be cut up with the root-crop, such as carrots, potatoes, turnips, parsnips, and cabbage with shorts or beameal. In the opinion of all successful dairymen the feeding of soft food cannot be too highly recommended, to those, especially, who desire to obtain the largest quantity of milk. Hay chopped and well moistened partakes more of the nature of green grass, and, therefore, becomes more succulent and nutritive. Towards the close of winter, when a herd of cows approach their time of calving, great care should be taken to not feed them too rich or heating food for a fortnight before this event, as the consequence may prove disastrous. A good supply of hay, with a few potatoes and plenty of pure water, will be sufficient. In spring, the best feeding for cows will be much the same as that of winter, the root crop still furnishing most valuable aid in improving and increasing the quality and quantity of milk. The object with man seems to be to see with how little food they can keep the cow alive on; we would say to all, stimulate the appetite and induce the cow to eat by a frequent change of diet, not merely enough to supply the constant waste of her system, but enough and to spare of a food adapted to the production of milk of the quality desired.—*Cor. American Stock Journal.*

On Shoeing Horses that Over-reach.

In the *Mark Lane Express*, a blacksmith who has had much experience in the art of shoeing, contends that in order to prevent horses from over-reaching they should be shod as follows:—" Make the toe-caulks very low, forward, standing a little under and the shoes set as far back as convenient with heel-caulks, so as to let the foot roll over as quick as possible. On the hind foot I have the heel-caulk low, and the toe-caulk high, and projecting forward keeping back the hind foot while coming up over a high toe-caulk, thus giving time for the forward foot to get out of the way. If thus shod, the horse will travel clean, without a click, and his speed will be increased on a trot fifteen or twenty seconds in a mile." The *Express*, has the following comments on the above method:—"The reverse of this rule is generally practiced. The blacksmiths, in view of preventing over-reaching, usually set the forward shoes as far forward as possible, and set the hind shoes as far back from the toe as they conveniently can. It remains for intelligent blacksmiths to decide which is the best method."

Hot water satisfiyeth no thirst, angry words mend no broken cups and saucers.

TRAINING SHEEP.

There is all the difference in the world in the way men handle sheep. Some sheep are never educated to the hand of the flockmaster, and when he desires to handle any particular animal, he rushes in among a bunch of sheep and makes a grab, with as little consideration as a dog would do in pursuit of mutton. No considerate shepherd will ever catch a sheep by the wool, and the violent manner in which some people take a sheep by the leg, is not much better.

Every flockmaster who keeps good sheep should have them so well educated that they can be handled without their being frightened. The sheep is a very timid animal, and a fright is almost as bad as a wound. We have seen a variety of ways of handling sheep well, one of the best of which is the method practiced by E. Hammond, of Vt. Mr. Hammond has in his sheep fold a long, slender lath, tapering out quite thin, and has his sheep so well trained to understand his desires, that when he goes in the yard with the lath in hand, and selects an animal for examination, he has only to reach out this sceptre and pat the sheep on its foretop when it stands perfectly still and allows him to put his two fingers under the chin, where it rests its head in quiet until allowed to go. If the sheep is disposed to run from him, Mr. H. pats away upon its face, until it shuts its eyes and becomes quiet. By the same gentle treatment, a sheep is laid upon its side and will not attempt to rise while the sceptre is held over it. In holding a sheep standing, Mr. Hammond seldom does more than to place the two first fingers under its chin, elevating the nose to a level with the eyes. If gently done, a sheep may be safely withdrawn from a huddle by the hind leg, but a better way is to walk in to the crowd and back it out by the hand under the neck. When the sheep come to understand that you do not intend to hurt them, they will soon be on good terms with their keeper, and no person should be allowed to go in among the flock who is not gentle in all his treatment of the sheep.

—*Ohio Farmer*

Selecting a Cow.

It is sometimes the case that the best judges will be deceived. A cow of very unpromising appearance, coarse in the neck, large boned, and second or third-rate milk marks generally, will, now and then, turn out to be first-rate; while another with these marks largely developed, fine in the head and neck and promising every way, will prove unsatisfactory. But a failure in this case is rare. Let the head be light, the forehead broad, the horn rather thin and clear, the eye clear and prominent, the neck thin, and the fore-quarters rather light, the back straight, the hind quarters well developed, wide over the loins, the carcase deep, the udder coming forward and well shaped, the skin soft to the touch, the teats well set, not too large nor too small, the tail long and thin, like a whip-lash. Such a cow ought to be a good one.—*Plowman*.

USEFUL RECIPES.

HORSES' FEET REQUIRE MOISTURE.—Nine-tenths of the diseases which happen to the hoofs and ankles of the horse are occasioned by standing on the dry, plank floors of the stable. Many persons seem to think, from the way they keep their horses, that the foot of a horse was never made for moisture, and that, if possible, it would be beneficial if they had cow-hide boots to put on every time they went out. Nature designed the foot for moist ground—the earth of the woods and valleys; at the same time that a covering was given to protect it from stones and stumps.—*Ohio Far.*

GRUB IN THE HEAD.—A correspondent of the Wisconsin Farmer gives the following as a remedy for grub in the head of sheep. It is worth trying, and looks quite reasonable:

"About the first of March, make a mixture of one quart of tar, one pint of spirits of turpentine, one pint of linseed oil; simmer well, and when cool, mix two ounces of black pepper ground fine. Make a small swab by winding tow or flax on a small, tough stick, dip it in a mixture and gently slip it up the nostril to the bridge of the nose. Go through the flock in this manner. If on the barn floor, you will find grubs there in a little while. The turpentine, kills, the oil loosens, the pepper makes the sheep sneeze them out, tar is healing. I never knew a sheep to die of grub in the head after being treated as above."

Preventive.—Take the above mixture without the pepper, and go through the flock as above in October, or prior to putting them into winter quarters, as it will destroy all the parasites, and the sheep will do well through the winter."

FOUL HOOFs IN SHEEP.—I may say to thee that some years ago I had a valuable ox, which occasionally was lame, from what I believed "Hoof Ail." I tried blue stone, tanner's oil, etc., which relieved him for a time. I made some "King of Oil," and applied between his hoofs, which I believe entirely cured him, so that I never knew or heard of his being lame afterward. About that time I sent the receipt to the Ohio Cultivator, and it was published in it. I also gave some other experience in the use of the Oil. It cleans a sore, and heals from the bottom in man or beast. I have tested it in severe cold weather, on bad wounds in horses. On immediate application it will cause suppuration, and prevent inflammation, in the coldest weather, without wrapping up the sore.

TREATMENT OF GALLED BACK.—George H. Dadd, Veterinary Surgeon, gives in the *Prairie Farmer*, the following:

So soon as an abrasion is discovered on the back of a horse, the animal should be excused from duty for a few days; the abraded parts should be dressed twice daily with a potion of tincture of aloes and myrrh. This simple treatment will soon heal the parts. Should there be no abrasion, but simple swelling, attended with heat, pain and tenderness, the parts should be frequently sponged with cold water.—Occasionally the skin undergoes the process of hardening, (induration.) This is a condition of the parts, known to the farriers of old as "siftast;" and the treatment is as follows:—Procure one ounce of iodine, and smear the indurated spot with a portion of the same, twice daily.

Some cases of galled back and shoulders are due to negligence and abuse, yet many animals, owing to a peculiarity of constitution, will "chafe," as the saying is, in those parts which come in contact with the collar and saddle, and neither human foresight nor mechanical means can prevent the same.

LICE ON SHEEP.—Open the wool from head to tail, and scatter in a small quantity of Scotch snuff, which is sure to kill them.

Ladies Department.

"ME, TOO!"

"We'll seek for flowers in the woods,"
I heard a mother say;
"For in the shady solitudes
My children love to play.
"Come, Willie, call the other boys,
Ere falls the evening dew;
And then another little voice,
Soft pleading, said; "Me, too!"

Oh, childish heart that could not bear
Her name should be forgot!
Oh, childish love that longed to share
With all the common lot!
Such tone should ne'er be heard in vain,
So tremulous and true;
A link in that sweet household chain,
She claimed her right—"Me, too!"

But not alone in childhood's years
The heart gives out this cry;
'Tis heard amid the silent tears
Of life's deep agony,
The lonely soul, athirst for love,
Will cry as infants do;
And lift, all other tones above,
Its passionate "Me, too!"

Formed by One hand we live and die;
Before one throne we kneel;
The longings of humanity
Send up one deep appeal.
Our nature's tendrils intertwine,
Fed by one common dew;
None seek in solitude to pine,
Each heart-throb says "Me, too!"

God teaches us in rank to stand
Firm as brave spirits should;
Joined heart to heart, and hand to hand,
In holy brotherhood;
And casting off the ice of pride,
Wear warm hearts mild and true,
Nor from the weakest turn aside,
Who feebly cries: "Me, too!"

And, little child, who sweetly plead,
With love learnt long ere speech,
Lift up thy golden baby head
To hopes thou yet shall reach;
For when His angels gather in
His holy ones and true,
In that fair garner thou shalt win
A place—He needs thee too!

BABIES.

They do say that a woman is an "unnatural monster" who fails to love these "adorable little innocents." I "can't see it!" Still, if it be so, I "knuckle under," "come to" and "acknowledge the corn;" for to me they are the softest, ugliest, reddest, wriggling abominations in the world!

Who is it who has not experienced the pain of having them about the house? Just the opposite to Mrs. Toodles' investments—they are extremely *un*-handy! They are worse than the Egyptian plague or the Asiatic cholera! They are the *miserere* characters who come after the inspiring epitheliums! They are tryants—despotic tryants! "Baby must have this," "Baby must have that." "Do keep less noise, you'll wake baby!" "Don't laugh so loud, you'll frighten baby!" "Don't smoke, you'll choke baby!" "Don't sing; don't play on the piano now, baby is going to sleep!" These constant cries are continued without cessation for days, weeks, months! And you must never unseal your lips. Oh, no! Not one cry of indignation must ever escape you. Outrageous ideal! Talk about martyrs to religion. Friend, just wait till you are carried through the *infantile inquisition!*

¹he "Auto Da Fe" is a feast of milk and roses to it!

Patience, that poor, abused virtue, sits down to console with you, perhaps, over your trials and tribulations, and just as you begin to feel somewhat calmer, another aggravation commences; very possibly it is at the "witching hour" of twelve, when, with thoughtful brow and flushed cheeks you are bending over unfinished MS. for which the "dear public" is calling—"wa-wa-wa," like the shriek of a *petite* demon, or the wail of a lost spirit (no wonder,) comes the shrill cry through the doors, the key-holes, the windows—"wa-wa-wa!" It may be, you are "cuddled" up in bed, when a rude hand shakes the door: "Let me in, Baby's got the colic!" "Well, I can't help it!" you say grumbly as you creep out from your warm place to admit the intruder. "No! you cold-hearted, ill-natured, selfish wretch, who do you suppose expects you to care? Where's the paregoric?" "I don't know."

"Well, I wish you'd go down stairs and get it. I can't leave baby."

Hastily you thrust your feet in your slippers and creeping, shivering down the stairs you go poking your nose around in all imaginable out of the way nooks and crevices, with a flaring bit of candle or an oil lamp you fear will explode—find the missing bottle of anodyne, and in returning with it, in all likelihood, receive not one word of thanks, or perhaps are thrust into a chair, the baby doused into your lap—to be rocked to sleep, (because you can soothe him!) and while you, poor patient martyr, are recounting the dismal story about the delicately constituted Thomas Grimalkin, that the lion-hearted, but insignificant John Green cast into a yawning abyss, out of sheer malice *prepense*, and the venturesome animal of the genus *mus* that ran up the clock—you are regaled with the sonorous, or the gentle puff-puff 'scaping parting lips. The maternal divinity slumbers! and you finally sneak off to bed, cold, weary, half dead for sleep, and just as you fall into a nice doze, you are ding-donged with the breakfast bell at the door until you are driven to the verge of gibbering insanity.

Perhaps you are deeply interested reading—u! matter! "Look at baby; ain't he the sweetest zing in de world? ; Look at his teeny-weeny, footsy-tootsies," and then a species of mumbling the toes and heels of said infant is carried on highly disgusting to a disinterested observer. You have a half-finished "Pastel"—baby dashes his sparrow-like claws over it, and it is destroyed. Jewels, rings, (not even your "engagement ring" is spared,) are strung on your prettiest neck-tie for "baby to jingle." Your pictures, your books, your album filled with the faces of loved ones, must be alternately licked and kissed. Your ink bottle turned over *ad libitum* on your letters, your face scratched, your mouth and nose twitched into as many varied shapes as if you were a *gutta percha* invention, or baby fingers instruments of torture—fingers also are stuck ruthlessly into your eyes, but you must never say a word, whatever your pain or indignation! What matter? Didn't baby do it? "Little innocents" indeed! Well, if they are "innocents," pass on stranger, and buy a "through ticket" to the city of the *GUILTY*, for there you'll find rest.—*The Ladies Home, Atlanta, Ga.*

Marriage.

Thou art the nurse of Virtue. In thine arms She smiles, appearing as in truth she is, Heav'n born and destined to the skies again. Thou art not known where Pleasure is adored, That reeling Goddess with the zoneless waist And wande'reng eye, still leaning on the arm Of Novelty, her fickle frail support; For thou art meek and constant, hating change, And finding in the calm of Truth-tied Love Joy that her stormy Raptures never yield.

THE WIFE.

Only let a woman be sure that she is precious to her husband—not useful, not valuable, not convenient, simply, but lovely and beloved; let her be the recipient of his polite and hearty attentions; let her feel that her care and love are noticed, appreciated and returned; let her opinion beasked, her approval sought, and her judgement respected in matters of which she is cognizant; in short, let her only be loved, honored and cherished, in fulfillment of the marriage vow, and she will be to her husband, her children and society, a well-spring of pleasure. She will bear pain, and toil and anxiety, for her husband's love is, to her, tower and fortress. Shielded and sheltered therein, adversity will have lost its sting. She may suffer, but sympathy will dull the edge of sorrow. A house with love in it—and by love I mean love expressed in words, and looks, and deeds, for I have not one spark of faith in love that never crops out—is to a house without love, as a person to a machine; one is life, the other is a mechanism—the unloved woman may have bread just as light, a house just as tidy as the other, but the latter has a spring of beauty about her, a joyousness, an aggressive and penetrating and pervading brightness to which the former is a stranger. The deep happiness in her heart shines out on her face. She is a ray of sun-light in the house. She gleams over it. It is airy, and gay, and graceful, and warm and welcoming with her presence; she is full of devices and plots, and sweet surprise for husband and family. She has never done with the romance and poetry of life. She herself is a lyric poem setting herself to all pure and gracious melodies. Humble household ways and duties have for her a golden significance. The prize makes the calling high, and the end sanctifies the means. "Love is Heaven and Heaven is Love."—Exchange.

DEFENDING THE TILTTERS.

The local editor of the Poughkeepsie Daily Press has come to the defense of the tilting hoops. He likes them, and is not afraid to say so, emphatically:

Show us the man that does not like hoops—tilting hoops—blest invention of Venus—graceful invention—delightful conception—fitful permitter of glimpses—flashes of things divine—white, graceful, symmetrical, joyous, drifting away, swimming away, gliding away, vanishes from the eager, devouring eye. So tilt white clouds upon the heaven—so through their fleecy skirts the sun-burst shows. Show us the man who does not like hoops—and we will show you a man that does not like rifts, vistas, openings into Paradise, who would shut out the glorious vision from his fellow man, and bid him grope below, nor turn his rapturous gaze to things above. Hoops—tilting hoops, true cincture of Venus—unfaded zone of the foam-born goddess.

"In them is every art and every charm,
To win the wisest, and the coldest warm."

Show us the feminine who does not like hoops—tilting hoops—and we will show you a woman whose feet are titanic, whose limbs are elephantine, or about the shape and size of a bean pole: whose ankles are terrible, whose charms are seen by the eye of faith alone—Platonian faith.

Oh! tilting hoop—kind disclosure—many may spurn thee. Snarling old bachelors, withered old maids and women who will never feel again the sweet spring-time thrill of their lost instincts, may scout thee—the deformed and the transformed may ignore thee—the lame, the halt and the blind may jeer thee—but we, we still will love thee, still cling to thee, still sound thy praise at morn and welcome eye. And oft as we see glimmering like the white silver moon through clouds those beautiful animated, parian shafts, whose delicious proportions were fashioned by the spirit of beauty, proclaim anew our thanks and our gratitude to the inventor of tilting hoops.

DOMESTIC RECIPES.

PORK CHOPS AND STEAKS.—Cut from the best end of the loin, or from the chump or leg, if steaks; remove the fat and skin, turn them frequently and quickly while broiling. If you gridiron be of the old fashion, it is better to keep it aslant on the fire. The handle being the lowest part it prevents very much of the fat from falling into the fire, the flare of which is apt to impart a disagreeable flavor to the chops. This observation applies also to mutton chops, and is useful if followed. Sprinkle them with salt when nearly done, and rub with a little fresh butter previous to serving; if for a side dish, garnish with crisped parsley.

CURRIED BEEF.—Take two ounces of butter and place in it a sauceman with two small onions cut up into slices, and let them fry till they are of a light brown; then add a tablespoonfull and a half of curry powder, and mix it up well. Now cut up the beef into pieces about an inch square; pour in from a quarter to a third of a pint of milk, and let it simmer for thirty minutes; then take it off and place it in a dish with a little lemon-juice. While cooking, stir it constantly, to prevent burning. Send it to the table with a wall of mashed potatoes or rice round it.

BAKED CORN PUDDING.—The following is excellent: Scald three pints milk, into which stir smoothly two cups corn meal, and one cup chopped suet, or half cup butter. When cooled add a well-rounded cup of *good* sugar, 2 beaten eggs, 2 teaspoonfuls of cinnamon, one of salt, and a pint of milk, mixed with three tablespoonfuls of flour. Add a cup of raisins, and bake 2½ hours.

POTATO YEAST.—Take four potatoes, slice them and boil in two or three quarts of water, together with a double handful of hops in a bag, and a handful of salt; then pour the liquid over enough wheat flour to make of the consistency of thick mush; when milk warm add a bowl of yeast and set in a warm place. In twelve hours it will be fit for use.

RAILROAD CAKE.—One cup of milk, 2 cups of sugar, 3 cups of flower, 1 cup of butter, 3 eggs, 1 teaspoon of salt, 1 of soda, 2 of cream of tartar; spice and flavor to you taste. Mix the cream of tartar dry into the flour, dissolve the soda in the milk and add it the last thing. Bake it in tins like Spanish buns.

TO MAKE COLD CREAM.—Three ounces of oil of almonds, half an ounce of spermaceti, and a quarter of an ounce of white wax. These must be melted over the fire and poured in a warm glass or marble mortar, when as much orange flower or rose water as the mixture will take up should be put in by degrees.

TO BAKE SHAD.—A layer of shad and one of pepper, salt and alspice; also a very little whole mace, and so on, until the stone jar or pan be filled. Cover it with vinegar, tie over it several thick sheets of paper, send it to the baker's and let it stand in their oven all night. This is capital.

MUTTON STEW.—This is a very good and economical stew for dinner. Take a shoulder of mutton or lamb, stew it well, then make a dressing of tomatoes, carrots, and a little onions, season well.

MACARONI.—As the season has arrived when the assortment of vegetables is small, there is no article which forms a better substitute than Macaroni, and hardly any that is so easily prepared. Take what you think will be sufficient for a dinner for your family, boil it about 20 minutes, then drain it and add to it say a pint or half pint of milk, a few lumps of butter about an inch square, some salt and a little pepper. Grate on the top some cheese, Parisian if you can get it, if not our American cheese will do. Bake 15 to 20 minutes, and serve hot.—*Germantown Telegraph.*

FLAT SURFACE FOR CORN.

The old fashion of hillling Indian corn—so long prevalent among our farmers—appears still to have many advocates. We are not at present prepared to discuss the subject in all its bearings, but shall merely offer a few remarks in relation to the advantages resulting from a flat surface on light soils, and from cultivating the crop with the cultivator, instead of cultivating with the plow, harrow and hoe.

It will be evident, we think, to every candid mind, that the practice of constructing large conical hills around the plants, on land which is light and dry, must inevitably tend to increase the effects of drought, inasmuch as it exposes more surface to the atmosphere, and consequently increases aeration at times when all the moisture contained in the soil is required for the support and sustenance of the plants. When rain falls, the conical hill conducts the water from the roots to the centre of space between the rows and hills, very little of the fluid being retained about the plants, or within range of the small roots, by which the *pabulum* is taken up by the growing plants, and without which they would immediately languish and decay.

On light soils we think hillling is always a disadvantage to the crop. Every fresh stratum of earth placed over the roots causes the protrusion of a new set of laterals, to the detriment of those previously formed. This exhausts the energy of the plant, without increasing, in any great degree, its powers of appropriating food from the surrounding soil, as the first formed roots cease to grow as soon as those caused by the deposition of new soil are developed, and, in a short time will be found to have lost their vitality and become mere worthless appendages, and which may be as well removed from the system as not:

Besides, when the corn is "hilled up," the stalks are "blanched" and rendered brittle by the fresh soil, and this, in case of strong winds, causes them to break, which is an injury involving a diminution of product and consequent loss. It has also been remarked that corn, when cultivated without "hilling," and with a perfectly level or flat surface, will, when prostrated by the wind, rise much more readily than when the opposite method is pursued. And I know this to be so.—*Cor. Germantown Telegraph.*

Marriage.

"Tis not to make me jealous,
To say—my Wife is fair, feeds well, loves company,
Is free of speech, sings, plays, and dances well;
Where Virtue is, these are more virtuous:
Nor from mine own weak merits will I draw
The smallest fear or doubt of her revolt;
For she had Eyes, and chose me: No,
I'll see, before I doubt; when I doubt, prove;
And, on the proof, there is no more but this,—
Away at once with Love, or Jealousy.

PREMIUMS TO COTTON PLANTERS.

The Messrs. William H. Oliver & Co., of Newbern, N. C. have offered a very handsome list of premiums, donated by several manufacturers and dealers throughout the country, to be awarded to the four successful competitors. The following we take from their circular:

To the Cotton Planters of Johnson, Wayne, Lenoir, Craven, Carteret, Onslow, Jones, Pitt, Hyde, Green & Beaufort Cos.

In connexion with a number of Manufacturers and Merchants, we have gotten up the following list of Premiums to be awarded to the four planters in the above named counties, who produce the largest number of pounds of Seed Cotton on one acre of land, (seventy yards square,) during the present year.

William H. Oliver & Co., Newbern, N. C., 3 Plows, 3 Collars, 3 pairs Trace Chains, 3 pairs Hames, 3 Spades, 3 Shovels, 3 Axes, 3 Hoes.

W. G. Clemons, Brown & Co., of Newbern, N. C., one of their Genuine Double Cylinder Georgia Cotton Gins.

McLean & Co., of Newbern, N. C., one of the best Over Coats that can be made in the United States.

R. Sinclair & Co., of Baltimore, Md., one of their Celebrated Propeller Straw Cutters.

Collins & Co., of New York, one of their Cast Cast-Steel Plows.

Whitford, Dill & Co., of Newbern, free transportation from Newbern to New York of twenty bales of Cotton.

A. T. Bruce & Co., of New York, one Roll of American Manufactured Cotton Bagging, and two Coils Rope.

Ames Plow Company of Boston, one Queen of the South Cotton Planter.

C. P. Goodspeed, of Newbern free transportation of ten bales Cotton from Newbern to New York.

C. A. Nelson & Co., of Newbern, one Mahogany Rocking Chair.

John S. Reese & Co., of Baltimore, Md., one ton of Soluble Guano.

Mc Combie & Childs, of New York, a twenty dollar Gold piece.

Baugh & Son, of Philadelphia, one ton of Baugh's Raw Bone Super Phosphate of Lime.

E. Whitman & Son, of Baltimore, one of their Virginia Corn Shellers.

P. Zell & Son, of Baltimore one ton of their Raw Bone Super Phosphate of Lime.

Beard & Co., of New York, one bundle of Iron Cotton Ties.

Each planter is requested to furnish a statement of the mode of cultivation, Fertilizer used, &c.

It is expected that these premiums will be greatly increased.

Planters who purpose to contend for them will please send us their address between this and the 1st day of September next.

To Preserve the Color of Stuffs in Washing.—I herewith send you an excellent method for washing dresses of printed muslins, lawns, etc., so as to preserve the colors, whether the pattern be printed in black or variegated hues. The dress should be washed in lather, and not by applying the soap in the usual way direct upon the muslin. Make a lather by boiling some soap and water together; let it stand until it is sufficiently cool for use, and previous to putting the dress into it, throw in a handful of salt; rinse the dress without wringing it, in clear, cold water, into which a little salt has been thrown; remove it and rinse it in a fresh supply of clear water and salt. Then wring the dress in a cloth and hang it to dry immediately, spreading as open as possible, so as to prevent one part lying over another. Should there be any white in the pattern, mix a little blue in the water.

We have tried this method and have never known it to fail.—*Germantown Telegraph.*